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UGANDA PROTECTORATE

Annual Report
# of the
Medical Department

For the Year Ended 31st December, 1953

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of the

Medical Department

FOR THE YEAR ENDED 31ST DECEMBER, 1953

LIST OF CONTENTS

Page

I—GENERAL REVIEW 1
II—VITAL STATISTICS 5
III—PUBLIC HEALTH 10
- A. General 10
- B. Nutrition and food supplies 11
- C. Communicable diseases:
  - (1) Arthropod-borne 13
  - (2) Helminthic diseases 15
  - (3) Direct infections 17
- D. Health education 23
- E. Maternal and infant welfare 24
- F. School health 27
- G. Environmental hygiene:
  - (1) Housing and town planning 27
  - (2) Water supplies 28
  - (3) Food hygiene 28
  - (4) Hotels 29
  - (5) Urban sanitation 29
  - (6) Rural sanitation 30
- H. Health and welfare of employed persons 31
- I. International and port hygiene 31
- J. Health of prisoners 32

IV—CURATIVE SERVICES 34
- A. Hospitals 34
- B. Dispensaries 36
- C. Diseases treated 37
- D. Mental hospital and mental health 39
- E. Dental service 41
- F. Radiological service 43
- G. Pharmaceutical service 43
- H. Ambulances and transport 45
- I. Registration of professional persons 45

V—LABORATORY SERVICES 46
VI—TRAINING SCHOOLS 49

Appendices
- I Legislation 53
- II Scientific publications 56
- III Revenue and expenditure 57
- IV Staff 59
- V Sanctioned establishment 61
- VI Causes of disease and death at hospitals—
  - A. Out-patients 63
  - B. In-patients, and deaths 66
  - C. Non-native deaths, registered and in hospital 73

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UGANDA PROTECTORATE

MEDICAL DEPARTMENT

Annual Report

For the year ended 31st December, 1953

I—General Review

It was interesting and profitable, when reviewing the work of the year which has ended, to look further into the past. A glance back as far as 1934 revealed surprisingly little change in the fundamental problems of medicine in Uganda and in the measures adopted to deal with them. The opening paragraph of an Annual Report of nearly twenty years ago, the first to be printed in the present format, could apply almost word for word to 1953. "The chief events of public health importance were (1) the spread of smallpox . . . and the successful suppression of the infection; (2) the increased incidence of trypanosomiasis; (3) the arrival of a team of workers . . . to carry out investigations; (4) the . . . welfare show organized by co-operation between the Administration, Agricultural, Veterinary, Education and Medical Departments; (5) the creation of an East African Joint Examining Board; (6) the commencement of systematic training of Africans . . .; (7) the preparation of a comprehensive list of requirements for hospitals and dispensaries. . . ".

Although in some respects the wheel appears to have turned full circle, notable progress has been made over the years in all these subjects, often involving profound changes in outlook. The political scene has altered considerably, with African participation in the councils of Government at all levels; the tempo of development has quickened; experience has enabled pitfalls and difficulties to be more clearly demarcated; the resources of the country both in wealth and in enlightened man and woman power have exceeded expectations; and tasks can now be attempted which twenty years ago would have been but wild dreams.

The eradication of disease depends upon the willing co-operation of the people. In the United Kingdom, diseases such as rabies or smallpox are not tolerated; any importation which by mischance occurs is rigorously hunted down until it is eliminated. The same can be said of diphtheria, anthrax, yaws or bovine tuberculosis in various countries, or even of human tuberculosis in limited areas. All too often, although there may be public outcry against prevalence of a particular disease, interest in an eradication campaign dwindles rapidly as soon as effective measures have reduced the incidence. Today, with the widened basis of responsibility in central and district councils, a much larger circle of persons must be convinced of the need for an effective eradication campaign if it is to be undertaken successfully. Twenty years ago, all that could be done was to watch for importations of smallpox infection, and suppress them after introduction. Today, the comprehensive action proposed by the World Health Organization brings the prospect of eradication from all countries within the range of man's vision.

Sleeping sickness can be controlled by simple measures designed to eliminate or reduce contact between man and tsetse fly. At the beginning of the century, this could only be done effectively by the mass evacuation of people from fly-infested areas. This is no longer practicable, as recent experience has demonstrated, and methods of altering habitats favourable to the tsetse fly have had to be evolved. Industrial development, tourism and population growth are continually extending the zone of human contact with fly and increasing the risk of infection. It is essential for control measures to be pushed forward to keep step with land usage.

Teams of workers are now an integral part of the medical armament, and the part they have played in the promotion of medical research has been invaluable. The team mentioned in the first paragraph, which was concerned with yellow fever, has developed into a permanent unit of the research organization of East Africa and now studies all aspects of virus disease. Research workers from the Medical Research Council of the United Kingdom are closely associated with the Medical School and Hospital on Mulago Hill; special research facilities have generously been provided by the Nuffield Foundation; malarial experts from other parts of East Africa and from Europe carry out investigations in Uganda; consultants from the Nuffield Panel have visited the Protectorate and advised on local problems; while the contributions of Rockefeller Foundation workers have culminated in the holding of a World Health Organization Seminar and Expert Panel Committee meeting in Kampala during 1953, to discuss yellow fever.

Health shows are now a well-established feature of health education, a departmental activity which has its own section in medical headquarters under a Senior Medical Officer. Originally inspired by enthusiastic medical workers, who were aware of the problems and the remedies but had little specialized knowledge of educational methods, the mass teaching of hygiene in rural areas is now being aided by a separate organization, the Department of Community Development. This Department is designed to accelerate the process of imparting the accumulated experience of European civilization to African people; its success will clearly require the closest co-operation with the service departments whose work it is intended to supplement, and from whom it must obtain advice and assistance on technical subjects.

The Joint East African Examination Board for African Sanitary Inspectors, which was set up in 1936 and is still in existence, was joined in 1937 by an inter-territorial examining board for the Makerere College Diploma in Medicine (now a Licence in Medicine and Surgery awarded by the College in its own right). An Ordinance making the Licence in Medicine and Surgery registrable was enacted in 1953; this Ordinance also provided for the registration of licensed practitioners certified by a Board of Assessors as having attained the requisite professional standard. It has been possible to raise the standard of medical education in Uganda to a level which approximates closely to the British standard; the recruitment of Asian practitioners for Government service is now restricted to registered practitioners; and it is hoped that the East African qualification will soon earn recognition by the General Medical Council of the United Kingdom.

The future of Uganda will depend upon the training of Africans, a matter to which the Medical Department has given special attention. This work has long been regarded by Government as of fundamental importance; apart from being an essential means of providing staff to make medical services more widely available, it increases the number of educated Africans who are capable of bearing responsibility for the balanced development of their own society. Within recent years, schools for nurses and nursing orderlies have been opened, supplementing those which train assistant health inspectors, medical assistants, laboratory assistants and dispensers. A course for assistant radiographers was started in 1953, and the training of midwives is envisaged in 1954 (up to the present, the training of midwives has been a monopoly of Mission institutions). Administrative talent is being sought out by promotion examinations, while the development of a corporate sense of responsibility is being fostered by increased consultation with staff at all levels in the larger medical units.

A survey of requirements for hospitals and dispensaries was undertaken in 1952, when proposals were drawn up for the utilization of accumulated funds for medical development. These proposals were sanctioned during 1953, and work has already started on several projects. In addition to the replacement of obsolete and inadequate buildings, they include extensions to rural dispensary and health services and the provision of additional specialised facilities, particularly for the treatment of ophthalmic disorders and tuberculosis. They also provide for the training of categories of staff not hitherto available—dental assistants and school health assistants.

To what extent have new problems arisen which were unappreciated or non-existent twenty years ago? The most important field is perhaps that of nutrition. Surveys were already in progress in 1933, and the dangers inherent in institutional feeding had been demonstrated. Little was known of the nutritional status of the general populace. Our ignorance is still great, but some of the difficulties which face future generations are gradually becoming defined—the problems of water supplies, of maintaining the earth's fertility, and of providing growing children with adequate protein during their formative years.

One of the lessons learnt during the past twenty years is that little permanent improvement in health can be expected from increased expenditure on curative services unless persons engaged in these services take an active part in health education. It is not enough to set aside special clinics to teach hygiene. Experience of child welfare clinics has been instructive in this respect. Clinical workers skilled in techniques which provide immediate and gratifying palliative results are often tempted to ignore the need for the removal of the underlying causes of illness. But the mass of overt disease should not lead to neglect of valuable opportunities; the time when a man is sick is the time when he is most likely to listen to advice on prevention. The technique of instruction and the provision of special material for this purpose are of great importance. One of the functions of the Health Education section is to encourage and assist the staff at clinics and dispensaries to carry out their task of pressing home the fundamental principles of healthy living.

It is satisfactory to record that African officers are filling positions of greater responsibility in the Department. There is no lack of opportunities for men of character and ability, as is shown by the fact that for part of the year an African medical officer was in charge of services in one of the larger districts. In a more restricted sphere an African vehicle mechanic is now responsible for the work of the headquarters' repair depot. There have been disappointments with clerical and storekeeping staff, who have not infrequently succumbed to the tempations of obtaining unauthorised advantages from their employment. This is indeed one of the most difficult problems facing the department. Plans have been made for the devolution of responsibility for rural medical services to Local Government level. The experiment will be closely watched, as its success or failure will largely depend upon the availability of men of integrity and devotion to duty.

Two small items conclude this broad summary of trends. The first is from Nsinze in Busoga District, where the staff of a rural dispensary gave valuable assistance to the injured passengers of an aeroplane which made a forced landing, for which they earned well-merited commendation. The second was the visit to Uganda of the wife of its first Director of Medical Services, the late Dr. Moffat, who arrived as a medical officer in 1893 and left as Director in 1906. This visit was a pleasant link with the foundation of the medical department; it also brought home the relatively short period during which British efforts and influence, operating in an atmosphere of trust and goodwill, have built up a service where none existed previously.

DISTINGUISHED VISITORS

United Nations Organisation

Miss J. McLarty, Nursing Consultant to W.H.O.

Syed Khaja Mahboob Hussain, U.N.S.W. Fellow.

Dr. Marti, Africa Office, U.N.I.C.E.F.

Dr. T. A. Austin, C.M.G., Regional Office for Africa, W.H.O.

Nuffield Panel of Consultants

Dr. N. Lloyd Rusby, Physician to the London Chest Hospital.

Dr. E. R. Cullinan, Physician to St. Bartholomew's Hospital, London.

Mr. J. H. Peel, Surgeon to King's College Hospital, London.

Dr. J. H. Middlemiss, Director of Radiology, United Bristol Hospitals.

COLONIAL MEDICAL SERVICES

Dr. J. C. R. Buchanan, C.M.G., Principal Medical Officer, Colonial Office.

Dr. J. L. McLetchie, O.B.E., Advisor on Rural Health, Nigeria.

Miss. F. N. Udell, M.B.E., Chief Nursing Officer, Colonial Office.

MEDICAL RESEARCH COUNCIL

Dr. A. C. Allison, Staines Medical Research Fellow.

Professor A. C. Frazer, Professor of Pharmacology, Birmingham.

OTHERS

Dr. P. Evans, } Great Ormond Street Liaison Committee.
Dr. Wilfred Sheldon, }

Professor L. S. P. Davidson—Edinburgh.

Dr. Grantly Dick Read—Johannesburg.

II—Vital Statistics

The results of several fertility surveys became available during the year and are given elsewhere in this section. They were carried out by medical officers and by staff of the East African Institute of Social Research. Studies of fertility were also made on samples collected during the 1948 census. The limitations of this method of obtaining information should be kept in mind. The total number of children born to each woman can only be assessed when the period of child-bearing is finished; fertility rates calculated on the data refer to a wide range of years which are already becoming history. In the same way, records of deaths of children are dependent on the frailty of the human memory, largely unsupported by documentary reminders, and hampered by the difficulty which unsophisticated people have in assessing ages at death in retrospect. The uncertainty introduced by these factors is similar to that affecting information derived from registrations of births and deaths.

A. AFRICAN POPULATION

The mid-year African population was estimated to be 5,400,000 on the assumption that the annual rate of increase has been 2%.

Deaths in hospital were slightly fewer, but this was accounted for in part by the omission of four rural hospitals from the list of those which submit classified returns. It is gratifying to record a marked decrease in the number of deaths ascribed to ill-defined causes, which are now less than one per cent of the total. The other category showing a decrease is that due to all forms of malaria (221 as against 258 in 1952).

Diseases for which an increased number of deaths were recorded are: —

	1952	1953
Carcinoma, all forms	42	70
Kwashiorkor and other deficiency diseases	57	75
Burns and scalds	54	77

No registration data have ever been available from Karamoja District, and the results of an enquiry into the history of 771 births were therefore of interest. The histories were obtained largely from the fathers, and gave death rates up to the age of two, and between two and puberty, of 150 and 12 per thousand respectively.

The histories obtained from a survey at Kisozi, a few miles to the west of Kampala, gave an abortion rate of 85 per thousand pregnancies and a still-birth rate of 27. The infant mortality rate to the age of 12 months, based on 538 live births, was 180, while the subsequent average annual death rates were 19 between the ages of 1 and 5, and 7 between the ages of 5 and 15. The census samples for Buganda gave an infant mortality rate of 240.

The net results, including those of other surveys, can be conveniently summarized by tabulating the proportion of live-born infants who were stated to have died before attaining the age of puberty. These proportions are: —

	%
All Buganda (1948 Census samples) . .	40
Mengo—Kisozi	28
Karamoja	37
Bunyoro—Kibiro	40
Bunyoro—Kihoko	47
Toro—Bwamba	57

Fertility data were available from surveys in Buganda only. The average number of live births in completed families was 3·2 in Kisozi and 4·8 in the ten per cent sample of the Census. This last figure is equivalent to a gross reproductive rate (female births per woman) of 2·3; using the above survival figure for Kisozi, this is equivalent to a net reproductive rate of 1·3, or a 30% increase of the population (ignoring migration) in a generation. The actual increase between 1931 and 1948 was 51% (all Buganda, including migration).

TABLE I

Health of African Officers

	1951	1952	1953
L.C.S. Officers	1,790	2,050*	2,319
Deaths notified	1	2	4
Invalided out	—	3	13
Recorded illnesses causing absence from duty	214	163	241
Recorded days on sick list	932	763	1,915
Recorded number granted sick leave . .	1	3	6
Rates—			
Daily recorded sick as percentage of L.C.S. officers	0·1	0·1	0·2
Average duration of absence in days . .	4·4	6·7	8·0

* Estimated

The average duration of absence was six days for males and fifteen days for females.

The causes of death of the officers included in the above table were: —

Male, aged 40—Malignant hypertension.

Male, aged 43—Carcinoma of liver.

Male, aged 45—Malignant hypertension.

Male, aged 24—Typhoid.

The events recorded above are known to be incomplete. In Kampala, for example, the recorded illnesses are almost entirely those of the staff of Mulago Hospital, and the experience of that one institution was: —

	Males	Females	TOTAL
Total L.C.S. staff	93	93	186
Total illnesses recorded	13	39	52
Total days off duty	358	626	974
Average duration of each illness in days ..	28	16	19
Average daily per cent off sick	1·1	1·8	1·4

The commonest causes of illness were: —

	Illnesses	Days off duty
Upper respiratory infection ..	10	73
Pelvic disorders and pregnancy ..	7	132
Dysentery	6	61
Malaria	5	39
Peptic ulcer	5	218
Pyrexia of unknown origin ..	4	21
Tuberculosis	3	243

The hospital staff probably submitted to prolonged investigation and hospitalization with better grace than others would. The three diseases causing the longest absence from duty may be due to the unusual conditions of infection, strain and temptation to which they were exposed.

B. EUROPEAN POPULATION

In the absence of migration records, no firm estimate of the European population is available. Although there may have been a slight decrease in the number of Europeans working on the hydro-electric scheme at Jinja, there has been an obvious expansion of the whole European population, which is believed to number about 7,000. Births of Europeans numbered 191 (176 in 1952, and 109 in 1948) and 37 deaths occurred (26 in 1952, and 39 in 1948). Four deaths of infants under the age of one year were recorded.

TABLE II

EUROPEAN PATIENTS AT GOVERNMENT HOSPITALS

	Year	Official		Non-Official		Total
		Male	Female	Male	Female	
Out-patient attendances	1952	3,122	2,755	1,133	699	7,709
	1953	3,161	2,831	1,653	1,128	8,773
In-patients	1952	306	338	312	186	1,142
	1953	327	484	385	245	1,441
Deaths	1952	3	1	4	1	9
	1953	—	1	2	1	4

European patients treated at the main centres were: —

	In-patients		Out-patients	
	1952	1953	1952	1953
Kampala	866	1,076	3,684	3,491
Entebbe	63	105	1,529	1,499
Jinja	137	195	1,213	1,654
Mbale	73	65	538	616

TABLE III

HEALTH OF EUROPEAN OFFICERS

	1951	1952	1953	
			Males	Females
Number on staff list	983	1,127	1,045	163
Average resident	827	934	902	150
Deaths	2	4	1	—
Invalided out	6	6	2	1
Illnesses causing absence from duty	404	459	343	65
Days on sick list	2.751	3,251	2,141	502
Granted sick leave	35	54	38	11
Rates—				
Daily sick as percentage of average number resident	0·91	0·95	0·65	0·92
Average duration of absence in days	6·8	7·1	6·2	7·7
Average duration of sick leave in days	12·6	13·6	11·5	11·0

The cause of death of an officer included in the above table was: —

Male, aged 24—Polyposis of intestine.

The causes of invaliding from the service of officers included in the above table were: —

Male, aged 23—Streptococcal stomatitis.

Male, aged 52—Hypertensive heart disease (died 3 months later).

HIGH COMMISSION DEPARTMENTS

52 officers were absent from duty on account of illness for a total of 330 days.

One officer, a male aged 26, was invalided out on account of chemical dermatitis.

C. ASIAN POPULATION

Although no accurate estimate of the Asian population is available, some indication of its rate of expansion can be obtained from annual returns of poll tax revenue, as the Asian community forms the bulk of the non-African population which is liable to this form of tax. The indication is necessarily crude, as increases in revenue shown below may be swollen slightly by increases in average earnings and by more effective collection of the tax and arrears. It suggests, however, that the non-African population has risen from 40,000 in 1948 to about 65,000 in 1953.

Year	1948	1949	1950	1951	1952	1953
Revenue from Poll Tax	52	55	60	72	79	92

(Non-native tax: £ thousands)

Asian births numbered 2,687 (2,685 in 1952, 2,049 in 1948), while deaths were 231 (214 in 1952, 190 in 1948). Deaths of infants under one year of age numbered 45, seven of these being in respect of infants less than one month old.

TABLE IV

ASIAN PATIENTS AT GOVERNMENT HOSPITALS

	Year	OFFICIAL		NON-OFFICIAL		TOTAL
		Male	Female	Male	Female	
Out-patient attendances	1952	5,743	2,480	2,767	1,965	12,955
	1953	4,784	2,052	3,983	2,736	13,555
In-patients	1952	279	293	617	991	2,180
	1953	242	237	715	1,243	2,437

Asian patients recorded at the main centres were: —

	IN-PATIENTS		OUT-PATIENTS	
	1952	1953	1952	1953
Kampala	1,261	1,388	4,158	4,115
Jinja	383	379	2,397	1,240*
Entebbe	118	122	2,562	2,155
Masaka	167	204	142	190
Tororo	70	129	2,326	2,829
Masindi	84	57	169	105
Mbale	45	62	1,429	1,490

*Returns incomplete

TABLE V

HEALTH OF ASIAN OFFICERS

	1951	1952	1953
Number on staff list	398	440	326
Estimated average resident including temporary staff	600	550	550
Deaths	1	1	1
Invalided out	—	—	3
Illnesses causing absence from duty	572	560	662
Days on sick list	2,504	3,858	2,952
Granted sick leave	10	11	7
Rates—			
Daily sick as percentage of average resident	1·0	1·9	1·5
Average duration of absence in days	4·4	6·9	4·5
Average duration of sick leave in days	18·8	12·8	15·1

The cause of death of the officer included in the above table was: —

Male, aged 46—Disseminated sclerosis (death occurred in India).

The causes of invaliding of the officers included in the above table were: —

Male, aged 51—Psychasthenia.

Male, aged 44—Pulmonary tuberculosis.

Male, aged 49—Bronchiectasis.

HIGH COMMISSION DEPARTMENTS

542 officers of High Commission departments were put off duty fo a total of 3,693 days (449 officers and 3,559 days in 1952).

The death of one officer was recorded—

Male, aged 23 (E.A.R.H.)—Bronchial asthma.

Three officers were invalided out of the services: —

Male, aged 50 (E.A.P.T.)—Chronic alcoholism and cirrhosis of liver.

Male, aged 40 (E.A.P.T.)—Headaches and giddiness.

Male, aged 49 (E.A.P.T.)—Headaches, giddiness and amnesia.

III—Public Health

A. GENERAL

The sources of information which can throw light upon the state of the public health are of three kinds. First, there are returns; these should provide, in theory at least, a complete record of all the events under consideration, such as the registrations of births and deaths and the notifications of infectious disease. Secondly, there are samples obtained from what may be regarded as permanent sampling centres—namely, the hospitals and dispensaries. Lastly, samples may be obtained for special purposes, as in leprosy or nutrition surveys. These last are undoubtedly the most accurate, if random samples (i.e. chosen by methods known to yield representative results) can be obtained and if all persons in the sample are examined; but they are expensive in time, travelling and staff. The first have proved a failure unless some inducement for registration or notification is given, or unless the returns are manifestly put to useful purpose. The second are in practice often the most useful sources of information, provided that possible errors of interpretation are kept in mind. The commonest of these are due to clerical slips and defects in the recording systems of hospitals. As a result, comparisons between successive years, or between districts, cannot always be made with precision.

The major public health conditions are dealt with in succeeding sections; one particular social handicap which has important medical aspects will be mentioned here.

BLINDNESS:

The frequency of eye diseases in Karamoja District has been recognised in the past, and it has recently been possible to investigate the problem in greater detail. Trachoma was judged to be the most important cause, and was more prevalent (43%) in the dry southern part of the district, which is almost entirely pastoral, than in the western and northern parts (8–22%), which are more agricultural and enjoy a better rainfall. By contrast, a survey by an ophthalmologist at an important senior school in the Eastern Province did not reveal a high incidence of eye disease or defects; this is understandable, as such sufferers would be unlikely to progress far up the educational ladder. For the control of trachoma, aureomycin ointment has been widely distributed; although it has given good results with in-patients, for whom regular administration could be assured, its value for routine out-patient use has yet to be proved.

B. NUTRITION AND FOOD SUPPLIES

Fears were expressed about the middle of the year that local shortages of food might result from the paucity of the early rains, particularly in the Northern Province. Fortunately, rainfall was more abundant in the second half of the year, although for most districts except those along the western border the total rainfall for the year was below average.

Increased utilization of maize flour was noted in several districts; nearly 20,000 bags (each of 200 lbs.) were imported into Karamoja, while the African Local Government imported 3,500 bags into Lango District. An illuminating example of the complex results of rainfall vagaries was recorded in Acholi. Stimulated by the excessive rainfall at the end of 1951, attempts were made to grow a second crop of cotton during the dry season. As a result, the main staple, finger millet, was planted several months too late in 1952, and there was a shortage of stored grain in 1953.

Around Lake Victoria, the low rainfall in the early months of 1953 led to a scarcity of plantains and to difficulty in obtaining fresh milk for hospital patients. In times of scarcity, large institutions have the greatest difficulty in maintaining balanced diets; only the excess over local needs is brought into the open market, and the threat of Tender Board sanctions holds no fears for the African trader. The effect was most marked in the mental hospital, where twenty-six patients showed signs suggestive of pellagra after several weeks on a maize flour diet. A few cases of vitamin A deficiency were reported from Luzira and Lira prisons.

Several workers investigated blood protein levels in different parts of the Protectorate and among various classes of the community. These studies may in time throw light upon nutritional problems. Evidence of serum iron deficiency during pregnancy was obtained in an investigation at Mulago Hospital.*

Kwashiorkor was discussed at a conference held by the Centre International de l'Enfance in Brazzaville, at which Uganda was represented. An assessment of various diets used for the treatment of infants with this disease has shown that the physical bulk of food used is a factor of major importance. Even dried skimmed milk needs to be supplemented by concentrated food; otherwise, growth is often disappointingly slow, in spite of the disappearance of acute symptoms. Calcium caseinate has also been used, while Dean† and his colleagues have had good results with soya beans. After adequate cooking to destroy trypsin inhibitor and bitter factor, the beans have been found more assimilable than skimmed milk. Administered with bananas, sugar and vitamin B12 concentrate, they have produced remarkable increases in weight, in one case attaining a rate of three and a half times as great as that of normal American children.

A medical officer has been carrying out field nutrition surveys, directed in the first instance to the assessment of the nutritional status of population groups living in their home surroundings, with particular reference to differences in diet. Groups have been studied in Toro, Kigezi and Bunyoro. The results should be of value for comparison with data for urban workers derived from the same tribes.

The Nutrition Advisory Committee endeavoured to obtain estimates of total food production, and paid particular attention to the availability of food for workers in the larger towns. The conclusions were similar to those reached in respect of hospital diets; namely, that the traditional plantain would have to be replaced by some food of greater intrinsic value, and that reliable food supplies for towns and large institutions could only be ensured by the use of cereals which can be transported economically and stored without deterioration.

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* Holmes, E. G. (1953) *E. Afr. Med. J.* 30. 427.

† Dean, R. F. A. (1953) *Treatment and Prevention of Kwashiorkor.* Bull. Wld. Health. Org. *9*, 767.

C. COMMUNICABLE DISEASES

(1) Arthropod-Borne

MALARIA

Rainfall during the first half of the year was not so heavy as in 1952, and no abnormal incidence of malaria was reported. The frequency of this disease is indicated by some figures supplied by medical officers. In Acholi, clinical malaria was recorded in over 40% of children under two years of age, but in only 1% of adults. A parasite rate of 47% was found among children up to the age of two attending child welfare clinics in the Kampala area. It was noted that infants under three years of age showed little evidence of illness when infected, older children suffering more severely from the disease.

Surveys relating to malaria control were carried out in three urban areas. At Lira, difficulties had been experienced with the afforestation and drainage of swamps; and in Tororo, where the development of cement and other industries has greatly enlarged the area to be controlled, a proposal to substitute residual spraying of houses for the customary larval control was investigated. The growth of Kampala has made it necessary to turn to areas outside its eastern boundaries for additional housing sites; the proximity of swamps will necessitate extensive work to reduce malarial and other insect-borne disease hazards.

Experts from outside Uganda also carried out surveys. Members of the East Africa Malaria Unit investigated conditions in Buganda; in the lacustrine hills near Butolo, the parasite rate in children under four was only 10%, an unexpectedly low rate for which reasons are being sought. Lira was visited by Dr. G. Davidson of the Ross Institute; his studies were mainly concentrated on Adekokwok, where the spleen rate in children up to 12 is 80%. Dr. A. C. Allison carried out investigations into the relationship between sickling and malaria.

PLAGUE

No cases were recorded during 1953. Two sudden deaths were suspected to be due to this disease, but the suspicions were not confirmed.

In view of the continued discovery of extra-territorial cases in endemic foci close to the western border of the Protectorate, attention was directed to rodent control in Lake Albert steamers and lighters, and to the abolition of cotton stores not conforming with modern standards of construction. The incursion of African co-operative societies into the cotton industry has led to requests for exemption of their buildings from the Plague Control Rules, measures which past experience has shown to be a necessary precaution against rat infestation and plague. This point of view is reminiscent of the remark of an African church dignitary when taxed with the omission of an ant-proof course from a school building—"Surely, doctor, Providence will not let the ants eat our school!"

RELAPSING FEVER

The total number of reported cases again fell, being 152 compared with 201 in 1952 and 455 in 1951. The districts reporting most cases were Masaka (70), Toro (37), and Ankole (32). Nearly all the cases in Toro came from the Katwe area. Sporadic infections have been contracted in Mubende and Bulemezi. Benzene Hexachloride dusting power is used for the treatment of houses in Ankole and Katwe.

TRYPANOSOMIASIS

The areas infected by *T. gambiense* are now few, but still continue to produce a steady quota of patients. They are mostly riverine foci from which *Glossina palpalis* has not been eradicated, and include the Terego area in West Nile District, the River Aswa and its tributaries in Lango and Acholi Districts, and the southern foothills of Ruwenzori in Toro District.

The situation in Buvuma Island shows little change. Routine blood-slides are taken at six-weekly intervals from the 1,300 inhabitants, but the infection still persists (4 cases in 1953, and 2 in 1952).

The area causing the greatest concern has been the Lake Victoria littoral of Busoga and Mbale districts, which is continuous with sleeping sickness areas in Kenya. Although the greater part of southern Busoga has been closed since the *rhodesiense* outbreak which started in 1940, there is constant traffic between landing places in the south-east corner and those on the Kenya coast and on islands in the Lake. Re-introduction of *gambiense* infection is a possibility which is being investigated, as such an event would affect the opening of the fishing industry on Dagusi Island and the development of parts of the closed area on the mainland. Registration of the whole population in the areas implicated has been started; it is noteworthy that the great majority of cases have been in adult males.

Further cases occurred in north-east Bunyoro, where sporadic infections have occurred over the past ten years. A case discovered in Buruli county was the first since 1949. It is likely that this area was the source of infection for Maruzi county of Lango District.

TABLE VI

TRYPANOSOMIASIS CASES NOTIFIED

	1950	1951	1952	1953	Presumed type of infection
BUGANDA—					
Buvuma Island	25	6	2	4	*rhodesiense.*
Elsewhere	2	1	2	—	—
EASTERN PROVINCE—					
Busoga District	19	3	3	35	*rhodesiense*
Samia County	14	7	12	62	*rhodesiense*
NORTHERN PROVINCE—					
Lango—Aswa River	3	9	3	4	*gambiense.*
Lango—Maruzi area	1	—	—	6	*rhodesiense.*
Acholi—Aswa River	2	8	10	4	*gambiense.*
West Nile District	8	2	6	9	*gambiense.*
WESTERN PROVINCE—					
Bunyoro	2	—	—	6	*rhodesiense.*
Toro	2	2	—	4	*gambiense.*
TOTAL CASES ..	78	38	38	134	
TOTAL DEATHS ..	6	2	2	—	

TYPHUS

A register of all cases of typhus diagnosed serologically was started in 1947 at the Medical Laboratory, Kampala. Up to the end of 1953, 996 patients had been recorded whose sera had agglutinated one or more of the *Proteus* strains in a titre of at least 1/250.

Proteus OX 19 alone was agglutinated by 87% of the sera; of the 13% which agglutinated *OX 2*, three-quarters also agglutinated *OX 19*. In no case was agglutination at 1 in 250 reached with *OX K*. 41 cases were regarded as tick typhus on serological grounds; these included four Europeans and four Asians. It should be borne in mind that 99% of the sera came from patients treated at either Kampala or Bombo (31 miles from Kampala). During the year, murine typhus was recorded for the first time from Mityana hospital, 50 miles to the west of Kampala. Tick typhus in Europeans is diagnosable from the typical eschar, and such cases were reported from Kampala, Lango in the Northern Province, and Hoima in the Western Province. The number reported from the area around Kampala was considerably fewer than in previous years.

YELLOW FEVER

No case of yellow fever was reported in 1953. The role of insects other than *Aedes* species as potential vectors of yellow fever was discussed at the World Health Organization Seminar and Expert Panel Meeting on Yellow Fever held in Kampala. This matter has a bearing upon the sanitary status of Entebbe airport.

In Entebbe, there are extensive swamps breeding *Taeniorhynchus*, three species of which bite man avidly. *T.* (*Coquillettidia*) *fuscopennatus* is the commonest, but laboratory attempts to transmit yellow fever by it have failed. At certain times of the year *T.* (*Mansonioides*) *africanus* is abundant; although this specie has proved capable of transmitting the disease in the laboratory, yellow fever virus has never been recovered from it in the field, and it has not been inculpated as a vector. *T.* (*Mansonioides*) *uniformis*, a less common species, retains the virus for long periods, but has failed to transmit it by bite.

Aedes ægypti, the commonest urban vector, is the species against which the usual methods of control are directed. *A. simpsoni* was recovered twice from the Botanic Gardens during the lesser rains; except in Bwamba and Karamoja, it does not appear to bite man. *A. africanus* occurs in small lake-side forest patches near Entebbe, where monkeys have shown a high incidence of positive yellow fever protection tests.

(2) **Helminthic Diseases**

DRACONTIASIS

Surveys showed that about three per thousand of the population in north-western Acholi were affected by guinea-worm. The incidence is known to be high in the adjoining region of East Madi and in parts of

West Madi and the West Nile District. In Karamoja, the infection is apparently confined to Bokora county. A few cases were seen at Lira Hospital, but the infections were believed to have been acquired outside the district.

Kitgum is the hospital which reports the greatest number of out-patients attending on account of this disease (153), followed by Mulago (59 males) and then Gulu (47). Outside endemic areas, the cases attending hospital are nearly all immigrants from the West Nile District.

ONCHOCERCIASIS

A new focus of this disease was discovered in Mubende District, where the fast-flowing Muzizi river drops down to enter Lake Albert near Ndaiga Bay. At Nakalongo, one-quarter of all skin snips examined were positive for *O. volvulus* larvae, and a few clinical cases were found during a leprosy survey. At Bondo in the West Nile District, both *O. volvulus* and *A. perstans* were found together in one skin snip.

Onchocercal keratitis was reported in 4% of patients treated at the Eye Clinic, Jinja. It was noted that trachoma was also present in the majority of these patients, whereas it occurred in only 20% of other eye patients.

The treatment of the River Nile with D.D.T. in July, 1952, produced a marked reduction in the number of Simulium flies up to the end of 1953. The approaching completion of the Owen Falls dam will result in many of the old breeding places becoming immersed in quiet water. An application of D.D.T. will be made from the dam site when the water level has been stabilized.

SCHISTOSOMIASIS

Investigations in north Bugabula county of Busoga District showed that 8% of school-children at Wesunire and Kidera were suffering vesical schistosomiasis. The disease appeared to be equally frequent among girls and boys. Cases of this disease were also reported from Bunyoro District, but the infection had in all cases been acquired in Lango. In this latter district, disappointing results were reported in the control of snails by the use of copper sulphate and in the oral treatment of the disease with lucanthone compounds; with the dosage of drug used, some patients still passed viable ova after more than one course of treatment, while unpleasant side effects were reported in 50% of those treated. Infestation does not seem to cause conspicuous morbidity in the areas concerned.

A survey of the snail population of dams in East Acholi was carried out by the Entomologist, as the increasing number of dams which are under construction or projected may add to the risk of infestation. Fortunately, even in Teso District where some of the earliest dams were constructed and *Biomphalaria* abound, no evidence that the disease has been contracted from the dams has yet come to light.

OTHER FILARIASIS

Two cases of loiasis were diagnosed in Acholi, both in patients from the south-west Sudan.

Hydroceles are among the commonest surgical conditions encountered at Lira and Soroti. A study of hospital returns suggests that Moroto and Tororo may also tap foci of filariasis. Little is yet known about the frequency of *W. bancrofti* infection. A survey made during the war years in the Middle East* revealed a high incidence (40%) of this infection in Uganda troops. At Rhino Camp (West Nile District), 4% of 130 night bloods examined during 1953 showed the presence of *W. bancrofti.*

(3) Direct Infections

ANTHRAX

Several medical officers have expressed the view that this disease tends to be concealed. Attempts to obtain information from patients about the source of infection are often fruitless, and it is understandable that shortage of animal protein should render the burning and burial of infected carcasses a most unpopular measure.

In Mengo District, infection is believed to be common in Singo county, although only one case, a prisoner, came to light. Thirteen cases were reported from Bwera in South Toro during January (25 during 1952), and were attributed to eating goat's meat. Other districts in the Western Province notifying cases were Bunyoro (34 cases with one death, from Bugungu), Ankole (12 cases and 2 deaths) and Kigezi (2 cases). The cattle districts of Teso and Karamoja in the north-east provided only two cases each.

CHICKEN-POX

Although a notifiable disease, chicken-pox is usually of little importance in itself; no deaths attributable to it have been reported in recent years. Its main public health importance is the difficulty in diagnosis which occurs when alastrim is active. The annual number of cases reported by Government medical officers has usually been between 700 and 900, but rather more were notified during 1953 (1,292). Small epidemics occurred at Mubende and in Luzira Prison. The district notifying the largest number of cases was Acholi (358), while in the previous year it was the West Nile District (170). The West Nile District also held the record in 1949. It is doubtful whether this indicates a higher incidence of the disease in the Northern Province; it probably reflects a more comprehensive notification of disease.

DIPHTHERIA

Information was received through various channels of fifteen cases, three of which were fatal. One patient was a European, two were Asians, and five were Africans. All except two occurred in the larger towns (Kampala 7, Jinja 4, and Mbale 2).

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*Fine, J. et al., (1943), *But. Med. J.* ii. 327.

INFECTIVE HEPATITIS

As in other tropical territories, the recorded frequency of this disease has increased. Small foci of two or three cases in one place about the same time is the common picture; one important aspect of the disease is the need to distinguish it from yellow fever.

LEPROSY

African communities have shown increasing interest in measures for the control of this disease, and further experience has been gained in the management of settlements by local authorities.

After minor setbacks, the three local authority settlements which were started during 1952 in the Northern Province are now working satisfactorily. The need for reliable methods of accounting for foodstuffs and other articles purchased in bulk was emphasized by expensive losses at two of the centres. The advantages of placing settlements near existing medical units were obvious.

In the Western Province, a settlement for 400 patients was created at Kisinga by the initiative of the county chief and his council; it was only after the camp had been started that the assistance of Government officers was solicited. In Bunyoro and Mubende, more modest centres are under construction. Voluntary labour is being used for the initial construction of the camp and roads of access. Ample land had to be found, so that the patients could be as self-supporting as possible in regard to food. General supervision will be undertaken by the local chiefs.

A camp to house 200 patients was envisaged in Busoga, but difficulty was experienced in getting patients to accept separation from their homes and families. While surveys aimed at assessing the incidence of leprosy in Mbale District have still to be completed, out-patient treatment facilities at Nakaloke proved popular. Government officers have played an active part in surveying, planning and administering camps. This work has been stimulated and aided by frequent visits from the Specialist Leprologist, whose efforts have done much to promote progress and an understanding of policy. A pleasant example of the relationships created was a football match between the patients at Alelele camp and an "official" team comprising Europeans, Goans and Africans.

The Mission leprosy centres have continued their good work, and in three areas are closely associated with the supervision of treatment in local authority camps.* At Kumi-Ongino, where in previous years difficulties had arisen through the high cost of purchased food, the acreage under cultivation was increased and more ploughing oxen were brought into use.

The accompanying table indicates patterns of expenditure at the larger centres, and also shows where supervision or medical care has been provided from other sources. Estimates of the cost of maintaining patients in leprosy settlements vary from £5 to £35 per head per year.

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*Williams, E. H. and P. H. (1953) "The Story of Kuluva". *Leprosy Review*, XXIV No. 3, p. 133.

The laboratory facilities at centres were greatly improved by the allocation of microscopes and other equipment purchased from Lady Cohen's Charities Appeal Fund. Discussions concerning the site of the leprosy research unit for East Africa finally led to the selection of Itesio in Kenya, which is fairly close to centres in the Eastern Province of Uganda. The British Empire Leprosy Relief Association (BELRA) has contributed generously towards this project, and has also assisted by maintaining skilled workers at other Mission centres.

TABLE VII

EXPENDITURE BY LEPROSY SETTLEMENTS

	Bunyoni	Nyenga	Buluba	Kumi-Ongino	Alito ALG	Alelele ALG	Kuluva AIM	Kuluva ALG
	£	£	£	£	£	£	£	£
Staff	915	355	942	Details not available	Details not available	72	26	50
Food and housekeeping	1,066	1,839	2,614			2,955	182	614
Stores and equipment	—	367	523			—	56	72
Drugs and dressings ..	257	98	248			—	—	603
Transport and vehicles	279	138	546			170	27	
Buildings—								
new	1,297	—	715			316	—	
repair	334	204	—			1,119	—	
Other	39	—	—			—	9	32
TOTALS ..	4,187	3,001	5,588	—	2,000	4,632	300	1,371

(Kisinga is estimated to have cost £1,000)

TABLE VIII

PATIENTS IN LEPROSY SETTLEMENTS

	Resident at start of year	Admitted	Births	Deaths	Resident at end of year
BUGANDA—					
Nyenga (Mengo) ..	311	101	11	7	267
EASTERN PROVINCE—					
Buluba (Busoga) ..	510	125	3	4	429
Butambogwe (Busoga) ..	—	20	—	—	20
Kumi–Ongino (Teso)	798	403	1	10	866
NORTHERN PROVINCE—					
Alito (Lango) ..	170	99	1	—	250
Alelele (Acholi) ..	54	137	4	3	183
Kuluva (W. Nile)					
A.I.M. ..	45	65	7	6	86
A.L.G. ..	92	95			178
Metu (Madi) ..	—	41	—	—	40
WESTERN PROVINCE—					
Kisinga (Toro) ..	—	459	—	6	398
Bunyonyi (Kigezi)	790	85	38	9	605
TOTALS ..	2,770	1,630	65	45	3,072

CEREBRO-SPINAL MENINGITIS

The incidence of meningococcal infection remained low during the year, as in 1952; this may be due in part to the absence of any long dry spells, which have in the past favoured epidemic spread of the disease. The majority of the cases of meningitis recorded in hospital returns have been due to organisms other than meningococci.

Notifications of cerebro-spinal meningititis totalled 148 with 33 deaths; after review of the laboratory evidence, only 58 cases and 18 deaths were accepted as being meningococcal in origin. Of these, 17 occurred in Buganda Province.

MEASLES

844 cases were notified, with no deaths. On the whole, the disease appears to be widespread and of sporadic occurrence; the highest monthly notifications were 48 for Lango in March, and 362 for Teso in July. Buganda units treated the largest number as hospital out-patients (161); Eastern Province units treated the largest number of in-patients (56), largely during the last quarter of the year.

MUMPS

Twice as many hospital out-patients were treated for mumps as for measles, but information from notifications is not available. There appears to have been a marked increase of the disease in Acholi during the last quarter of the year.

POLIOMYELITIS

The number of patients treated in hospital during 1953 was one-ninth of that recorded for the previous year. It is likely that the total notifications (45) included a number of sequelae. Only one non-African case is known to have occurred. The recorded cases were fairly uniformly distributed throughout the country, and three deaths were notified. Five adults were seen in the West Nile District with transverse myelitis of doubtful origin, and similar cases were also encountered in Tororo.

RABIES

Rabies at present occurs in two widely separated areas. In the south-east of Uganda, infected animals may enter from the Kenya rabies area. In the north-west, there is a zone contiguous with a rabies area in the Belgian Congo. The West Nile District has been a proclaimed area since 1935; although no definite human cases have been recorded in recent years, the disease still occurs in dogs and wild animals such as jackals. The number of animal brains found to be infected were—

	1945	1946	1947	1948	1949	1950	1951	1952	1953
West Nile ..	3	—	—	1	—	—	5	6	—
Tororo ..	—	6	6	—	—	—	—	—	1

SMALLPOX

"Vaccination is one of the really good things the Europeans have done. My father can remember when whole villages were destroyed by smallpox". In spite of this unsolicited testimonial from an African living in Masaka, it is chastening to recall that it is now 150 years since a potent vaccine has been available to control this disease, and yet it can still be a lively menace.

The scattered outbreaks of alastrim during 1952 in the south-west and north-west corners of the Protectorate were followed in 1953 by a substantial wave which spread across Mengo District. The heaviest incidence in the early part of the year was in Kyagwe county to the east of Kampala, producing 28 notified cases in March; the outbreak moved westward during the year, presumably carried by contacts from the main focus. 158 cases were notified from Mengo District, and 64 cases occurred in Ankole at the end of the year. A total of 341 cases and 2 deaths were notified, against 243 and 4 deaths in 1952. Over 1,591,000 doses of vaccine were used in the control of the disease. One case of encephalitis following vaccination was reported from Tororo.

TUBERCULOSIS

It was known twenty years ago that immigrant labour predominated among patients treated at Mulago Hospital for pulmonary tuberculosis. The long journey on foot from the south-west, coupled with inadequate feeding, helped to account for their special susceptibility; and being strangers in the land, they would be more likely to come to hospital when ill. An analysis of the hospital registers for more recent years shows that the mortality from tuberculosis in this group is still high, and is comparable with that found in industrialised countries.

Treatment with streptomycin and isoniazid is controlled by specialists at Mulago Hospital, who maintain close contact with medical staff undertaking the care of tuberculosis patients at district hospitals. In Mulago itself, therapeutic trials for the Medical Research Council were started. These trials involved selection of the most hopeful cases, and their retention in hospital for long periods. Additional tuberculosis wards are to be provided with the aid of money allocated from the African Development Fund.

The relationship between human and animal tuberculosis is a complex problem. Unlike most cattle in Africa, the long-horned cattle in Ankole suffer severely from bovine tuberculosis. The clinical impression that human disease is also more prevalent in this part of Uganda was strengthened by Santon Gilmour's survey in 1949/50 (*Annual Report*, 1950, p. 16). Investigations carried out over many years by Carmichael, to which references are given in the Veterinary Department's Annual Report for 1952 (pp. 47/8), showed that pulmonary infection in man was predominantly due to the human type of bacillus, only a small percentage being due to the bovine type. Goats which appeared healthy have been found with advanced pulmonary lesions due to the bovine bacillus, while sheep have been known to contract fatal infection from man.

TABLE IX

PULMONARY TUBERCULOSIS IN MULAGO HOSPITAL

	Admissions	Deaths	Fatality rate	Average number in hospital	Duration of stay
			%		*days*
Annual Average—					
1929/37 ..	71	33	32	6	31
1945/49 ..	166	67	40	25	55
1951	229	92	40	53	84
1952	150	42	28	58	140
1953	159	43	27	80	184

TYPHOID

There was an increased prevalence of this disease in widely separated parts of the Protectorate, 763 cases being recorded with 100 deaths. Mengo District provided 310 of these cases, 42 being among prisoners in Luzira Central Prison. The majority of the European cases originated in Mbale, where a relatively high incidence of the disease has from time to time occurred among Asians and Africans living in the vicinity of the township. The number of cases among Europeans (13 as against 1 in 1952), suggests that resistance among the community has been allowed to deteriorate.

Judging by hospital returns, the Northern Province has been relatively free from typhoid in the past; but possibly as a result of the abnormally wet years experienced since 1951, fairly widespread outbreaks have recently been reported. In May, at the height of the long rains, an outbreak occurred in the north-west of Lango District and in the adjacent part of Acholi District. On the whole, cases tended to be sporadic, and scattered over a wide area. The largest aggregation was at Bala in June, when 42 persons were affected. It was often possible to account for foci by the movements of infected persons. Towards the end of the year, an outbreak affected 15% of a labour force of 160 working in uninhabited country in northern Bunyoro. It was noted that symptoms were often mild or atypical.

VENEREAL DISEASE

The introduction of penicillin aluminium monostearate for the routine out-patient treatment of syphilis and gonorrhoea has had some curious results. It was to be expected that the amount of bismuth used should fall (see page 44), but the sharp decline in the number of patients presenting themselves for treatment was the reverse of what had been envisaged. This decline affected all forms of venereal disease and all parts of the country, and may be related to a decline in ante-natal attendances—

	1952	1953
Out-patients—		
Syphilis ..	29,760	22,725
Gonorrhoea ..	23,381	16,659
Other V.D. ..	5,497	3,894

There were some popular doubts whether the new "one-shot" treatment could be as efficacious as the older forms of therapy, which appear to have been valued in proportion to the number of injections needed.

The distribution of syphilis in the Northern Province is of interest. African soldiers returning from the 1939-1945 war are suspected to be a factor in the higher incidence in Kitgum compared with other parts of Acholi District, just as the K.A.R. camps at Kakamari in northern Karamoja 30 years ago are still believed to have been responsible for an endemic pocket of syphilis in the locality. Investigations showed that non-venereal transmission occurred in this region from the communal use of skins as seats, while many chancres in young children were attributed to realistic sex-play from early ages. Tribal customs, in particular the enforcement of strict exogamy, may be responsible for the relative freedom of many parts of northern Uganda from venereal spread of the disease.

A sidelight on the prevalence of the disease in areas of high incidence is the recording of optic nerve atrophy with positive Kahn reaction in 0·5% of all patients attending the Jinja Eye Clinic. At child welfare clinics around Kampala, 1% of all infants were found to be syphilitic.

D. HEALTH EDUCATION

A convenient starting point from which to survey the changing attitude towards education of the public in health matters is the 1934 Model Welfare Exhibition held in Kampala. It owed its inception to the "News of the World" Best Baby Competition, and Kampala secured second place in the British Empire (excluding the United Kingdom).

This was the first organized effort in health education to be made in the Protectorate, and a second exhibition was held in the following year in rural surroundings near Mbale. It was again planned on an ambitious scale, with permanent buildings erected by the Public Works Department, active participation by medical headquarters' staff, and an opening ceremony performed by His Excellency the Governor. While an undoubted success, it was obvious that such methods could make little impression upon the bulk of the rural population. Routine efforts by means of posters in dispensaries and talks by medical officers were inevitably limited in their effect, and could do little to accelerate progress.

The demobilization of large numbers of African soldiers after 1945 provided a pool of trained and resourceful men, some of whom received training as Hygiene Orderlies in the Medical Department while others became demonstrators in the Social Welfare Department. The nucleus of an organization whose staff had some technical knowledge of the subject and of how to impart it to others was thus formed; the way was opened to a determined attack on ignorance.

Full use of this new approach began in 1949. Efforts were not dissipated in the construction of buildings and the preparation of elaborate demonstrations, but were directed primarily to making the recipients of instruction do things themselves. Although the variety of demonstration material was increased, the main difference was that the gaping onlooker saw the demonstrator turn up his shirt sleeves, had a hoe thrust into his own hands, and learned by digging and the sweat of his brow.

A second difference was that continuous and progressive campaigns could now operate. Once the impetus to improve water supplies or dig latrines had got under way in a district, it was possible to keep it going by the efforts and enthusiasm of health inspectors and chiefs who had the interests of their people at heart.

The holding of county shows during 1953 was in some cases hampered by extraneous circumstances. In Karamoja, violent disputes over grazing areas between the Suk and Karamojong were unpropitious for health education. Pictures displayed at a Coronation Agricultural Show in Bunyoro were much appreciated—they were all stolen.

The West Nile team found that living demonstrations, whether of leprosy patients or onchocerca larvæ, awoke keen interest; assistance rendered by doctors of the Africa Inland Mission was greatly appreciated. The Madi demonstration attracted distinguished visitors from across the border, including Sudan Government officers and members of the Sudan Legislative Council. In Busoga, European supervision of preparations for the county show was reduced to a minimum, without notable detriment to its success; in Bugishu, Community Development and Health staff combined in an Improved Homesteads Competition; while in Kaberamaido county of Teso District, the central demonstration was followed by a month's campaign in each sub-county.

An impetus to spring protection has been given by allocations to districts from Community Development funds. In some districts, this extra work has had to be supervised by health staff, or staff trained by the Medical Department. In others, valuable aid has been received from Community Development officers.

E. MATERNAL AND INFANT WELFARE

The work performed by maternity centres and hospitals increased during the year. Recorded births in institutions are now greater by a third than they were four years ago.

The number of ante-natal patients reported from Mission centres increased to 40,947 (36,166 in 1952), while the number of patients attending Government centres decreased to 75,778 (77,342 in 1952). Total births in mission centres increased from 9,973 in 1952 to 11,062 in 1953; and in Government centres from 14,456 to 15,517.

Mishaps relating to childbirth—death of the mother, still-births, and deaths of infants before discharge from hospital—show no sign of decreasing, as might be expected if a greater number of normal deliveries were being undertaken. The impression gained is that the pressure of abnormal cases coming in from rural areas is as great as ever, and that services are barely coping with the increase.

TABLE X

SUMMARY OF MATERNAL AND CHILD WELFARE SERVICES

(Mission and Government)

	1949	1950	1951	1952	1953
Beds available..	—	1,280	1,286	1,304	1,485
Ante-natal patients	98,499	98,472	114,331	113,508	116,635
Ante-natal total attendances ..	309,811	290,977	314,447	277,176	302,967
Abortions treated in hospital ..	1,532	1,158	1,222	1,432	1,780
Live births in hospital ..	18,101	20,433	21,950	22,844	24,962
Still-births	1,098	1,209	1,387	1,585	1,617
Infant deaths	486	496	571	641	684
Maternal deaths	214	215	301	248	266

Analysis of 33 maternal deaths at Mulago Hospital (32 in 1952) show that 8 were booked cases (rather more than 4,000 women attended the ante-natal clinic for the first time during the year) and 25 were emergency cases; the latter were either referred from other centres or came in spontaneously, often late in labour or after delivery. A feature recently noted in connection with these fatalities is the substantial proportion of patients in whom some toxaemic element can be discerned, using this term to indicate the high blood pressure and eclamptic group. Of the booked cases who died, 3/8 fell into this group, as did a rather lower proportion (4/25) of the emergency cases. In four of these patients, renal defects were found—infection in three, chronic nephritis in one with absence of a kidney as a contributing factor in one case.

Infection other than renal was recorded in six patients, one being a booked case; in two instances it appeared to result from death and maceration of the foetus, and in two others a low grade terminal peritonitis had occurred. Mechanical causes included rupture of the uterus in five patients; two of these were subsequent to previous cæsarean section.

In some instances, the use of harmful native methods was suspected. One induced abortion was accompanied by haemorrhagic nephritis, while an obscure condition with hyperpyrexia was attributed to native medicine.

Retention of the placenta was ascribed in one fatal case to squeezing by relatives. The administration of drugs or the application of mechanical methods is believed to be a not uncommon cause of early rupture of the membranes and tonic contraction.

Obstruction and delay above the brim occurred twice, and in the canal (deep transverse arrest) three times. Delay due to abnormal presentations occurred four times, and for no discernible cause twice; it was often associated with other contributory factors, and was only once the sole cause of death. More often it initiated the chain of complications which led to panic, unskilled interference and death.

Haemorrhage or sepsis from imperfect separation of the placenta occurred on four occasions. The importance of other general conditions in producing fatalities, either alone or in association with the stress of childbirth, was demonstrated; anaemia was a factor in five patients, malaria in two, and enteritis in two.

The above analysis refers to deaths in Mulago Hospital alone, as fuller information and post-mortem confirmation were obtainable from this series. In Mengo District, a medical officer reported that breech presentations, placenta prævia, uterine inertia and post-partum hæmorrhage were less frequent than in Britain, but that as a result of obstruction low in the pelvis, rupture of the uterus and fistula were more common.

Doctors tend by training to be more interested in a sick child than in a child devoid of symptoms or complaints; a mother is usually readier to bring a child for advice when she is worried about the immediate outcome of an obvious illness. As a result, many districts do not hold child welfare clinics, or refer to them as clinics for sick children. Yet in spite of limitations of staff and materials, special clinics for children have marked administrative and educational advantages. As a rule, little difficulty is found in encouraging mothers to bring healthy children to them.

In the neighbourhood of Kampala, the following conditions were noted among apparently healthy children attending such clinics during the weaning period: malaria parasite rate 35%; spleen rate 25%; septic skin lesions 12%; scabies 4%; conjunctivitis 12%; congenital syphilis 1·5%; tuberculosis 0·6%. The chief acute infections treated were acute diarrhoea and vomiting (10%), whooping cough (7%), otitis media (4%), and measles (2%).

The Catholic Mission authorities have prepared plans for a new Maternity Training School to help in providing midwives for the northern parts of the Protectorate. This school is to be set up at Lwala Maternity Centre, near the borders of Teso and Lango.

F. SCHOOL HEALTH

Although no comprehensive system of school inspection or examination of scholars is in force, visits to ensure the maintenance of an adequate level of hygiene and sanitation are made by district health staff as opportunities permit. Provision for the training of School Health Assistants has been included in the African Development Fund programme. When workers of this type are available, effective steps can be taken to improve the health of school children by regular inspections coupled with advice to individuals and classes. This special service is particularly important in view of the overcrowding so often found in schools, a state of affairs which is an inevitable outcome of the great demand for education.

The results of examinations carried out by Government dental surgeons are mentioned on pages 41 and 42. Arrangements were made in some areas for first-aid boxes to be provided at schools; the use of their contents is likely to require careful control, in view of the popularity of medical materials.

School feeding arrangements were studied in Mengo District. Various suggestions, largely on matters of organization, were put forward in order to improve the diet of scholars. Few day schools as yet provide midday meals. In view of the heavy sacrifices which most parents are making to educate their children, such meals are unlikely to become practicable in the near future.

G. ENVIRONMENTAL HYGIENE

(1) Housing and Town Planning

Although town planning has been concerned mainly with the rapid expansion of Kampala and Jinja, the needs of other urban centres, ranging from the industrial township of Tororo to the frontier fastness of Moroto, have not been neglected. Plans for future development have been sketched out for them all. The implementation of plans is a slower business, needing legislative backing, the support of public opinion, and in some cases, substantial funds. One township on the main road to the west has been zoned, but plots fronting on the the road await surveying before further action can proceed. In another town, plots were set aside for Africans in the development area; it was found that most applicants had little idea of the required standard of construction nor of an acceptable lay-out.

Areas immediately outside Kampala which are not on Crown Land still present an unsolved problem. A Planning Board is in existence, but it is not certain that the present set-up is the best means of achieving results. A survey was made of three areas, each of one acre in extent, which housed Asians, Africans and a mixed population respectively. The average density per acre was 7 houses, 40 rooms and 108 inhabitants; the features calling for the most adverse comment were the defects and insufficiency of latrines. The Asian dwellings were more commodious (average size of room 167 square feet), but the density of population was almost twice as great as in the African area. The construction of the Katwe by-pass road should produce some improvement of conditions in this unhealthy locality.

Surveys revealed overcrowding in widely separated parts of the country. In a large "minor" township in Busoga District with 150 plots, only 57 plots had been taken up; they housed 2,000 Asians. On 40 of these 57 plots there was no space for the construction of additional latrines.

The Advisory Board of Health delegated authority to the Fort Portal Township Authority under Building Rule 36, to permit under certain conditions the retention of temporary buildings beyond the statutory period, in view of the rapid development of the district and difficulties in transporting materials to it.

(2) Water Supplies

Extension of services continued throughout the coutntry. In Kampala, the installation of a four million gallon tank in the residential area was begun, and investigations were made into various aspects of safety of the water supply. Estimations of free chlorine in the water reaching consumers were carried out for several weeks, and measures to control contamination at the intake from Lake Victoria were reviewed. In addition to the natural hazards of the tropics are added the frailties of human nature; the story of the water supply assistant who recorded daily "½ p.p.m.", because he thought that was what he was supposed to do, is perhaps paralleled by the dispensary who entered in his register all the injections he intended to give next day, qualifying his proposals by the remark "out of stock".

In Jinja, constructional operations at the Ripon Falls made it necessary to erect a new pumping station on the lake shore. Bore-holes are the safest source for small towns, but difficulties in finding adequate supplies of water were reported from Mubende, Fort Portal and Kitgum. Where underground supplies are not available, more eleborate treatment plants are required. All township supplies, whether from bore-holes or not, are gradually being converted to chlorination systems.

(3) Food Hygiene

MEAT

New slaughter houses were provided at Mubende and Bwaise (close to Kampala), and a new meat market for the Kampala area was established at Nakulabye. The causes for which meat is condemned vary in different regions; 21% of nearly 200 carcases examined in Ankole District were found to be infected with tuberculosis, but only 1–2% in other Western Province districts. *Cysticercus bovis* is an important parasite in the Eastern and Northern Provinces, and 46% of carcasses were affected in Moroto. Masindi, which is supplied mainly from Lango, reported 20%; other

Western Province districts reported between 5–12%. Liver fluke damage accounts for a high percentage of condemnation; this again is most prevalent in the north.

MILK

Watering of milk is a common practice in some areas when milk is in short supply. After successful prosecutions in court, a marked improvement has been noted; one court collected fines amounting to Shs. 640/- in one month from 14 milk adulterators, and a seller had his licence withdrawn for a third offence. More stringent standards are being demanded in the larger centres; in Jinja, following bacteriological examination of bottles, steam sterilization was required in the local dairies.

SODA WATER

A small soda water factory in Toro had its licence cancelled on hygienic grounds. In Jinja, a new factory with entirely automatic bottling equipment has been erected.

RESTAURANTS

Until recently, the traveller in search of a meal had the choice of hotels and rest-houses on the one hand, and eating houses on the other. The latter name was apt, as their facilities in many instances were strictly limited. Restaurants with aesthetic pretensions are now appearing in the larger towns. The difficulties which they have to face in obtaining satisfactory local supplies of foodstuffs have already been mentioned, while the recruitment, training and retention of staff are constant problems.

(4) Hotels

The amended Hotels Ordinance came into force during the year, under which both hotel and hotel-keeper require to be licensed. Efforts are constantly made to encourage improvements in hotel services, a task which is rendered difficult by shortage of accommodation and lack of competition. The practicability of introducing a grading system for hotels of different standards is being examined.

(5) Urban Sanitation

The zone immediately outside the boundary of Kampala Municipality has received special attention. The proper maintenance of pit latrines is a major problem, both in private houses and elsewhere. Other difficulties mentioned by the African Assistant Medical Officer of Health in his report on a closely built-up area are the failure of the public to bring out their rubbish for the collecting van, malaria hazards created by culverts and the lack of roadside drains, and the numerous worn-out vehicles which adorn 37 "garages".

House-fly nuisances have been mentioned in several reports, and in some cases have been ascribed to defective bucket latrines. Otway pits have proved unsatisfactory in areas where the laterite sub-soil is not sufficiently porous; reversion to shallow trenching for night-soil disposal has been necessary in several instances.

Progress has been made with plans for enlarging the sewage system of Jinja, which will have to cope with a potential population of 80,000 and also with trade effluents.

(6) Rural Sanitation

A summary of efforts to improve rural sanitation was prepared and submitted to the World Health Organization during the year. Concerted action dates from the Pan-African Health Conference held at Johannesburg in 1935. Attention was focussed in the first instance upon two main topics, housing and water supplies. Various building methods were tried, including pise-de-terre and hessian plastered with cement, which proved useful as a temporary expedient in war-time. The replacement of grass roofs by tiles or metal sheeting was a popular advance, having obvious advantages in reducing danger from arson, in addition to its bearing upon rat infestation and plague. The design of house sponsored by health educators has not always met with general approval. The African's desire to have a European-type house was shown by the numerous buildings which sprang up around Kampala; the model houses erected for demonstration purposes often failed to attract. They were generally too expensive, too draughty and too formal; they had many excellent qualities, but they were not acceptable as African homes. The lessons were slowly learned. Although old mistakes are still sometimes made, the evolution of African dwellings into healthier homes has proceeded steadily over the years.

Water supplies in rural areas are often precarious. In long dry spells, the hand pump on the village bore-hole may be heard working all through the night. Simple methods have been devised for protecting water from seepages without endangering the supply, but their range of application has been limited by lack of money for materials and by the scarcity of trained workers. While money is now available from Community Development funds, organization of this work, or even the actual construction, often has to be undertaken by health staff.

Lango District reports encouraging progress, in spite of some opposition to new-fangled ideas. The health staff were concentrated in teams, whose efforts produced 2,500 new latrines, 200 houses under construction, 900 animal houses and 800 refuse pits. The production of pre-fabricated concrete latrine stances is being undertaken in several districts. It is reported from Teso that at the subsidized price of Shs. 7, demand far exceeds supply.

Renewed interest was shown in the digging of latrine pits by means of a hand borer. This tool had been tried before the 1939 war without success. Although other territories had reported favourably upon it, experience in Uganda suggests that it is unlikely to be of practical value outside a few exceptional localities, such as the alluvial deposits alongside Lake Albert; elsewhere, it has failed to pierce the hard laterite.

H. HEALTH AND WELFARE OF EMPLOYED PERSONS

The idea of forming Construction Corps or Labour Companies has spread throughout the Northern Province. There are now three in Gulu, two each in Lira and Moroto, and one in Kitgum. They work for either the P.W.D. or the A.L.G. at special rates of pay (approximately Shs. 60 per month), with communal feeding and the issue of one pound of meat daily. An eight-hour day is worked, and an average gain in weight of over half a stone in three months among new recruits was reported. Only the fit can join. Uniport huts are generally used for their housing.

An increase in large-scale employment of labour has taken place in the west, with the development of Kilembe Mines and the extension of the railway. Good progress was made with the construction of a hospital at Kilembe. Work on the railway extension proceeded from the relatively well-served areas of Buganda to sparsely inhabited and relatively inaccessible localities on the escarpment of the western rift valley. The main medical centres have been at Kibarara, on the Katonga saddle, and at Nkoko on the edge of the Lake George flats. Trouble was experienced with sanitation, and an outbreak of bacillary dysentery occurred at the latter camp.

Returns are submitted by some of the larger employers of labour, covering a daily average of 37,000 employees. The daily proportion reporting sick was 2·1%, the lowest recorded since returns have been made. The major causes of sickness were malaria—18%, respiratory diseases and injuries—11·5% each, and tropical ulcers 6%. Interpretation of the recorded death rates is complicated by varying conditions in different types of employment; thus, deaths are more likely to be noted where labour is housed on an estate than where employees live in their own homes at a distance.

TABLE XI

MORBIDITY RATES—EMPLOYED LABOUR

	Agriculture	Construction	Factories	Mines	All workers
Daily sick rate—	%	%	%	%	%
1952	2·1	3·8	5·5	5·1	2·7
1953	1·7	3·6	5·0	3·2	2·1
Average duration—	*days*	*days*	*days*	*days*	*days*
1952	2·5	2·6	2·8	2·6	2·7
1953	2·3	5·5	2·4	2·3	2·5

I. INTERNATIONAL AND PORT HYGIENE

Of the six quarantinable diseases covered by the International Sanitary Regulations, only smallpox occurred in Uganda during the year. Yellow fever and plague, which appeared during 1952, were not reported. In view of the danger of plague being carried across the western borders of the Protectorate, rodent control measures were intensified in the Lake Albert marine vessels and in the warehouses at Butiaba.

AIR SERVICES

Increasing use has been made of the regular internal air service and of chartered aircraft for the transport of sick. On one occasion, a surgical team was sent by air to deal with an emergency in Tanganyika Territory.

At Entebbe, one fatal accident occurred to a ground worker. Permanent drainage of the runway was completed during the year, which should obviate anopheline breeding in future. The rainfall and *Aedes* index are shown below, the latter being satisfactory except for one month:—

ENTEBBE 1953—	Jan.	Feb.	Mar.	April	May	June
Inches of rain ..	1·4	1·0	4·7	10·6	5·8	2·5
Aedes index ..	0·1	0·0	0·4	0·2	0·4	1·1

	July	Aug.	Sep.	Oct.	Nov.	Dec.
Inches of rain ..	2·2	0·5	10·8	6·0	6·6	3·5
Aedes index ..	0·0	0·1	0·1	0·2	0·1	0·3

The total number of inspections during the year was 23,391; the lowest in any one month was 1,620 in February. *Aedes simpsoni* was discovered on two occasions during October in the Botanic Gardens. An average of 235 planes were disinsectized monthly.

J. HEALTH OF PRISONERS

The average number of prisoners showed a further rise to 3,476 (2,832 in 1951, 3,230 in 1952).

TABLE XII

HEALTH RATES FOR PRISONERS

	1949	1950	1951	1952	1953
Death rate per thousand ..	7·1	10·1	12·3	7·1	7·8
Percentage on sick list	1·2	1·3	1·6	2·4	2·3
Hospital admissions per thousand	502	507	498	439	486

It is gratifying to record that no death from pulmonary tuberculosis occurred among prisoners at Luzira Central Prison. One death from tuberculosis of the meninges was reported. The use of B.C.G. vaccination for prisoners is under consideration. Six cases of Xerophthalmia occurred; although the prescribed diet is adequate, it is not always possible to ensure proper distribution—prisoners have frequently been known to trade food among themselves.

TABLE XIII

Causes of Death in Prisoners

International List No.	Disease	1951	1952	1953	Remarks
A 1	Respiratory tuberculosis	8	6	2	Soroti and Mbarara.
A 2	Tuberculous meningitis	—	—	1	
A 9	General paralysis	—	2	—	
A 10	Other sequelae of syphilis	2	—	—	
A 12	Typhoid fever	—	—	2	Kitalya farm 1
A 16	Dysentery	—	2	2	Jinja, Masindi.
A 34	Infective hepatitis	—	—	1	Arua.
A 37	Malaria	—	1	—	
A 43	Other infective disease	1	—	—	
A 47	Carcinoma of rectum	—	—	1	Gulu
A 57	Malignant neoplasm	—	2	1	Sarcoma of spleen.
A 58	Leukaemia	1	—	—	
A 65	Anaemia	1	2	1	(with P.U.O.).
A 66	Abscess of spleen	1	—	—	
A 67	Psychosis	2	—	2	Melancholia.
A 70	Vascular lesions of C.N.S.	—	—	1	Sub-dural haemorrhage.
A 71	Meningitis	—	1	2	Masindi 1; both pneumococcal.
A 78	Transverse Myelitis	1	—	—	
A 82	Other diseases of heart	—	—	1	Jinja; hypertrophy.
A 89	Lobar pneumonia	3	1	1	Jinja.
A 90	Bronchopneumonia	2	2	—	
A 91	Other unspecified pneumonia	—	1	—	
A 95	Abscess of lung	1	—	—	
A100	Ulcer of duodenum	1	—	—	
A105	Cirrhosis of liver	—	2	—	
A107	Other digestive diseases	3	—	3	Kitalya farm 1.
A109	Chronic nephritis	3	—	—	
A110	Infections of kidney	1	1	—	
A136	Senility	—	—	1	Masindi: with enteritis.
A137	Ill-defined disease	1	—	1	
AN139	Fractured neck (AE 147)	—	—	1	
AN150	Bullet wound (AE 149)	1	—	2	Moroto 1.
	Crushed chest (AE147)	—	—	1	Arua.
	Suicide (AE 148)	—	2	—	
	TOTAL	35	23	27	Luzira 13.

As a result of past experience, prisoners admitted to Luzira Central Prison are given a loading dose of 75,000 I.U. of Vitamin A. The standard diet scale was slightly modified to increase the quantity of this vitamin supplied. Towards the middle of the year, cases of typhoid fever appeared among prisoners and warders. An inoculation campaign was carried out and repeated later. Two new Otway pits were constructed, and the installation of water-borne sanitation was begun. A separate female prison is being built.

Reports on Mengo Jail (Buganda Government) indicated that its cleanliness and efficiency had improved, and that the standard of the diet had been raised. Deaths of prisoners numbered 9, and 124 prisoners were admitted to hospital.

Moroto Prison has experienced dietary vicissitudes during the past years, and during 1953 it was reported that a mysterious weight loss occurred despite a perfectly kept diet ledger. During the dry season, when vegetables are scarce, 50 mgm. per head of ascorbic acid were issued bi-weekly. The average prison population increased from 50 in 1952 to 81 in 1953, mainly as a result of cattle raids and tribal fighting in the south of Karamoja District.

Reports on African local authority prisons were incomplete. In Lango, red palm oil is included in the diet; the most important recurrent deficiency was of water. Two cases of typhoid occurred in Erute jail. A new prison to accommodate 60 prisoners was built at Patonga (Acholi District). One prisoner from Gomba County (Mengo) died of anthrax.

IV—Curative Services

A. HOSPITALS

STAFF

The number of hospitals staffed by medical officers remained unchanged, but the prospects of reinstating the four rural hospitals downgraded to dispensaries in 1952 through lack of African medical officers did not improve. Several hospitals had less than their normal complement of medical officers during the latter part of the year.

BUILDINGS

The event of the year was the opening of the new Mbarara Hospital by His Excellency the Governor in September. This was the first large hospital (106 beds) to be built since 1937. It cost £53,000, and will have its own electrical generating plant for lighting and radiology.

Maternity wards were completed at Mubende, Hoima and Kabale, where previously only makeshift accommodation had been available. Additional staff quarters were erected at Jinja, Masindi, Tororo, Namasagali, and Bombo, and new houses for African medical officers were provided at Jinja, Kitgum and Tororo.

Damage to roof timbers by termites led to the closure of part of one ward at Mityana Hospital. A fall of ceilings from the same cause at Soroti Hospital made it necessary to undertake the replacement of the theatre, office, out-patient block and Asian ward.

Improvements to hospitals included a sluice room and theatre annexe at Masaka, with extensive repairs to the children's ward; a double theatre, out-patient clinic, kitchens and ward extensions at Jinja; and the re-roofing of a store and ward at Moyo.

Pre-fabricated roofing structures were used for the maternity ward at Mubende and for additional offices at Medical Headquarters. Extensions of units were undertaken at Masaka Training School, the Mbale School of Hygiene, and Lira Hospital, while work continued on the Nurses' Hostel, Mulago. Details are given in later sections.

MULAGO HOSPITAL

Mulago Hospital was recognized by the General Medical Council of Great Britain and Ireland as an approved hospital for post-qualification experience before registration. Its facilities for gaining internship experience have been of notable value to medical graduates of Makerere College, and are expected to fulfil local registration requirements.

Among administrative developments at Mulago have been a wider representation of specialists at monthly staff conferences; joint consultative meetings with lower grade staff; and assumption by African nurses of full responsibility for ward management. Visits to district hospitals by specialists from Mulago, both Government and Makerere, have continued and are proving of great value.

Building activity was confined largely to the Nurses' Hostel (£162,000), which is expected to be completed early in 1954. (See plate III). Work began on a metabolic ward and laboratory for research on infant malnutrition by a Medical Research Council group under Dr. R. F. A. Dean. The capital cost of this research unit is being met by the Nuffield Foundation.

NURSES' WELFARE

The importance of this subject is specially recognized, and at Mulago Hospital and Training School a European worker is employed for the purpose. The nurses contribute small sums towards the cost of recreations, and are assisted by a grant from the hospital welfare fund. A strong netball team has been built up, some of whose members have played in Protectorate trial games. Country dancing, taught by the Toc H Ladies' Club, is popular. Films are very popular, and the British Council and Department of Community Development have kindly assisted in providing cinematograph entertainments.

PATIENTS' WELFARE

A woman welfare worker of the Community Development Department continued to give valuable assistance to patients in matters which lay outside the scope of normal medical services. She was also able to take simple medical remedies into households which would otherwise have been without them. The problems tackled with success included destitutes camped outside Mulago Hospital, repatriation of patients suffering from leprosy, investigations into family background in cases of rape, after-care and guidance of women treated for venereal disease, occupational therapy, and maintenance of the morale of patients with tuberculosis or other conditions necessitating prolonged hospitalization. An African worker supported by the local branch of the British Red Cross Society also rendered valuable help in these tasks.

Welfare work outside the hospital included house-to-house visiting in the housing estates to discover sick children and to supply extra milk to those which were underfed. Another assistant from the Department of Community Development helped in the artificial limb service. Since 1951, over 100 limbs have been fitted by the Mulago surgeons; there is a waiting list of more than 200. Plans were completed for a hostel not far from Mulago Hospital, under the auspices of the Community Development Department, to cater for ambulant sick.

PHYSIOTHERAPY

The Physiotherapy Department of Mulago Hospital treated 963 patients. The staff consists of one European and one African physiotherapist (the latter an Assistant Medical Officer who lost his sight).

European and Asian patients (387 and 119 respectively) received 4,147 treatments at the Kampala Hospital. New apparatus included wall-bars and balance forms. Ante-natal classes were very popular.

ANAESTHESIA

Special attention has been given to improving the standards of anæsthesia in up-country hospitals, and the specialist (anæsthetist) visited a number of units for this purpose. It is intended to supply portable nitrous oxide sets for use by dental surgeons while on tour, and to provide modern anæsthetic apparatus and oxygen cylinders for the busier district hospitals.

OPHTHALMOLOGY

The arrival of a second ophthalmic surgeon made it possible to open an eye clinic at Jinja, and a ward is now reserved for eye cases at the local hospital. During the last four months of the year, 164 patients were admitted, 116 for operative treatment; nearly 1,500 out-patients were treated. It is planned to build a complete ophthalmic unit at Jinja, using an allocation from the African Development Fund.

B. RURAL MEDICAL SERVICES

BUILDINGS

Mpalo dispensary and maternity centre (Kigezi District), which was burnt down in 1952, was rebuilt and reopened during 1953. A new clinic building, replacing a temporary structure, was erected at Katete. In Ankole District, Bushenyi dispensary was rebuilt and a new dispensary constructed at Kiruhura. In Mengo District, Buvuma and Mwera dispensaries were rebuilt and wards erected at Mpigi, Tondola and Kasangati. A permanent ward was built at Bulisa, a rather inaccessible spot on the shores of Lake Albert, in Bunyoro District. A small rural unit was rebuilt in permanent materials at Kangole in Karamoja. A dispensary was sanctioned for Kyambogo Technical School, a few miles outside Kampala.

On the debit side must be recorded the collapse of Padibe dispensary (Acholi District) and damage to Kyanasoke (Mubende District), both due to termites. A building at Kalangala dispensary (Masaka District) was burnt down, arson being suspected.

MISSIONS

Capital assistance to Mission medical services to the extent of £140,000 from the African Development Fund was approved. This sum will be used for the replacement and improvement of Mission medical units and training centres. The Teso African Local Government is financing the construction of a new maternity centre at the Freda Carr Hospital (C.M.S., Ngora), and is also assisting the development of a maternity training school at Lwala Hospital (O.S.F.).

C. PATIENTS AND DISEASES TREATED

The returns summarized in the tables are affected by the down-grading of four rural hospitals in the Eastern Province to the status of dispensaries; it is unlikely that African medical officers will be available for posting to these units in the near future. Some fluctuations appear to be due to differing systems of recording new patients and re-attendances. It will be noted that the totals remain more constant than their components.

The number of patients remaining in hospitals is recorded at the end of each quarter. This has proved a useful check on the completeness of returns, and has also thrown light on changes in the management of individual diseases. In the case of pulmonary tuberculosis, the average stay in hospital of patients has risen progressively, a finding which is related to the increased effectiveness of modern treatment.

TABLE XIV

Summary of Units and Beds

(A) Government and African Local Government Institutions

Units	Kampala	Rest of Buganda	Eastern Province	Northern Province	Western Province	Total
General Hospitals—						
European	1	1	2	—	—	4
Asian	1	2	4	1	2	10
African—						
District hospitals . .	1	3	4	6	5	19
Rural hospitals . .	—	2	1	—	—	3
Mental Hospitals . .	1	—	—	—	—	1
Prison Hospitals . .	—	1	—	—	—	1
Dispensaries:						
With beds	—	26	22	37	28	113
Without beds . .	1	8	14	7	12	42
Aid-posts	—	45	12	10	34	101
Maternity Centres—						
At hospitals . .	3	5	6	4	5	23
At dispensaries . .	—	12	13	—	11	36
Solitary	—	—	1	—	—	1
Beds						
For Europeans . .	37	3	11	—	1	52
For Asians	55	13	33	3	7	111
For Africans—						
In district hospitals . .	621	446	642	371	344	2,424
In rural hospitals . .	—	108	30	—	—	138
In other units . .	—	367	735	151	375	1,628
For mental patients . .	322	—	—	—	—	322
For prisoners . .	24	42	—	—	—	66
Total Beds . .	1,059	979	1,451	525	727	4,741
General beds . .	626	690	1,204	480	589	3,589
Maternity beds . .	87	247	247	45	138	764

TABLE XIV—*continued*

(B) MISSION INSTITUTIONS

UNITS	Kampala	Rest of Buganda	Eastern Province	Northern Province	Western Province	TOTAL
General Hospitals—						
Hospitals	2	—	3	1	3	9
Others	1	18	15	4	3	41
BEDS—						
In hospitals ..	376	—	117	24	137	654
In other units ..	12	335	244	6	—	597
TOTAL BEDS ..	388	335	361	30	137	1,251
General beds ..	284	68	164	22	117	655
Maternity beds ..	104	267	197	8	20	596

(C) BEDS MAINTAINED BY EMPLOYERS OF LABOUR

	Kampala	Rest of Buganda	Eastern Province	Northern Province	Western Province	TOTAL
In hospitals	—	50	56	—	—	106
In dispensaries ..	—	24	6	—	31	61

TABLE XV

COMPARATIVE SUMMARY OF PATIENTS

GOVERNMENT AND AFRICAN LOCAL GOVERNMENT UNITS

Year	Hospitals			Dispensaries	All Units	
	Admitted	Died	Out-patients	Total patients	Total patients	Total Out-patients attendances
1951 ..	88,025	3,037	775,532	1,587,483	2,451,048	4,839,025
1952 ..	80,990	2,967	744,616	1,618,472	2,444,078	4,670,627
1953 ..	77,275	2,970	675,491	1,676,406	2,429,172	4,701,244

TABLE XVI

ANALYSIS BY PROVINCE

IN-PATIENTS	Buganda	Eastern Province	Northern Province	Western Province	TOTAL
Hospitals—					
Europeans ..	1,179	260	—	2	1,441
Asians	1,714	607	67	49	2,437
Africans	27,499	23,211	11,403	11,284	73,397
All races	30,392	24,078	11,470	11,335	77,275
Dispensaries ..	11,081	20,688	6,014	7,848	45,631
TOTAL ADMISSIONS ..	41,473	44,766	17,484	19,183	122,906

TABLE XVI—*continued*

ANALYSIS BY PROVINCE—*continued*

OUT-PATIENTS	Buganda	Eastern Province	Northern Province	Western Province	TOTAL
NEW PATIENTS—					
Hospitals—					
Europeans . .	5,023	2,821	440	489	8,773
Asians	6,460	6,172	398	525	13,555
Africans	240,972	174,177	124,467	113,547	653,163
All races	252,455	183,170	125,305	114,561	675,491
Dispensaries . .	350,760	586,952	360,134	332,929	1,630,775
TOTAL OUT-PATIENTS	603,215	770,122	485,439	447,490	2,306,266
RE-ATTENDANCES—					
Hospitals . .	350,154	129,035	153,410	147,308	779,907
Dispensaries . .	371,400	509,754	377,122	356,795	1,615,071
TOTAL ATTENDANCES	1,324,769	1,408,911	1,015,971	951,593	4,701,244
DEATHS—					
Hospitals—					
Europeans . .	3	1	—	—	4
Asians	27	13	1	1	42
Africans	1,343	888	373	320	2,924
All races	1,373	902	374	321	2,970
Dispensaries . .	253	391	241	158	1,043
TOTAL DEATHS	1,626	1,293	615	479	4,013

NOTE.—*Dispensaries* includes aid-posts and rural maternity centres.
Total Patients includes out-patients and patients admitted to hospitals or dispensaries.

D. MENTAL HOSPITAL AND MENTAL HEALTH

In spite of an increase in the number of patients admitted to the mental hospital at Mulago, the total number under care fell from 496 to 458 during the year; this was largely due to an increased number of deaths. The number of lunacy cases heard by the courts and the number of patients discharged from hospital were below the level of 1952.

At the middle of the year a census was taken of the patients who were analysed by sex, age, nature of mental disease, tribe, and locality from which they were admitted. These analyses showed immediately a striking difference between criminal lunatics and civil patients; whereas the former are fairly equally apportioned between all tribes and all districts in the proportion of 1·3 per 100,000 population, the number of the latter is related to the propinquity of their homes to the mental hospital. Criminal propensities are less common with idiocy and general paralysis, being more likely to occur with psychoses presenting as delusions, mania or melancholia.

The highest ratio of civil patients to population (30 per 100,000) was that of Kyadondo county, in which the mental hospital is situated. The next highest ratio was provided by the remainder of Mengo District (21 per 100,000), a rate four times higher than that of the rest of the Protectorate (5·7 per 100,000). The strikingly low rate (2 per 100,000) for Busoga District, which contains the second largest town in Uganda, and has for many years had important concentrations of estates and industrial labour, does not support the suggestion that urban or industrial conditions predispose to mental ill-health among Africans. The Baganda resident in Mengo naturally have a high patient–population rate (17 per 100,000); so do immigrants from Ruanda-Urundi (19 per 100,000), in whose case it is difficult to arrange for patients to be looked after by their families.

AGE AND SEX

Males preponderate among criminal lunatics and civil patients; both types of patients show a sharp increase in middle age, rising to fairly constant proportions in the older age groups. For criminal lunatics after the age of 35, the proportions are 5 per 100,000 for males and 2 per 100,000 for females. For civil patients in Mengo District after the age of 26, the proportions are approximately 40 per 100,000 for males and 30 per 100,000 for females. These latter rates are lower in other districts of Uganda, and it is of interest to note that the differences are greatest for the young and the very old. These are the age groups which are most likely to have kinsfolk able to look after them; mature adults who are in all probability key persons in their own family circle are less easily cared for in their homes, and their rates approach most closely to those recorded for Mengo.

One objective of the census of patients was to provide a denominator from which death-rates of patients could be calculated, and it was unfortunate that deaths were abnormally high during 1953. The death-rate was found to vary only slightly with age; for females, the rate was around 300 per thousand at all ages, and for males it rose from 300 at ages under 35 to 600 at ages over 45.

Epilepsy and idiocy with other forms of amentia occur in young patients. While amentia alone is fairly benign, epilepsy has a high mortality rate (500). Schizophrenia is the commonest disorder in young adults, with a mortality rate of 300. Syphilitic manifestations are spread over the middle years of adult life, with a high mortality rate (940); whereas mania, melancholia and delusional insanity in much the same age groups have a lower mortality rate (240). Tuberculosis again figured prominently among the causes of death, being responsible for 25 deaths (19 in 1952, 14 in 1951). The total deaths from all forms of respiratory infection rose from 23 in 1951 to 33 in 1952 and 47 in 1953. An increase in the number of deaths ascribed to dementia, from 2 in 1952 to 25 in 1953, is noteworthy; three-quarters of these patients were admitted on account of mental disease other than dementia (15 were schizophrenics), and it is suspected that pellagra may have been a contributory factor. The hospital was forced to rely upon maize flour as a staple food for part of the year.

The use of convulsant therapy more than doubled, and leucotomy was introduced towards the end of the year. The care which can be given to patients before certification and transfer to the mental hospital often

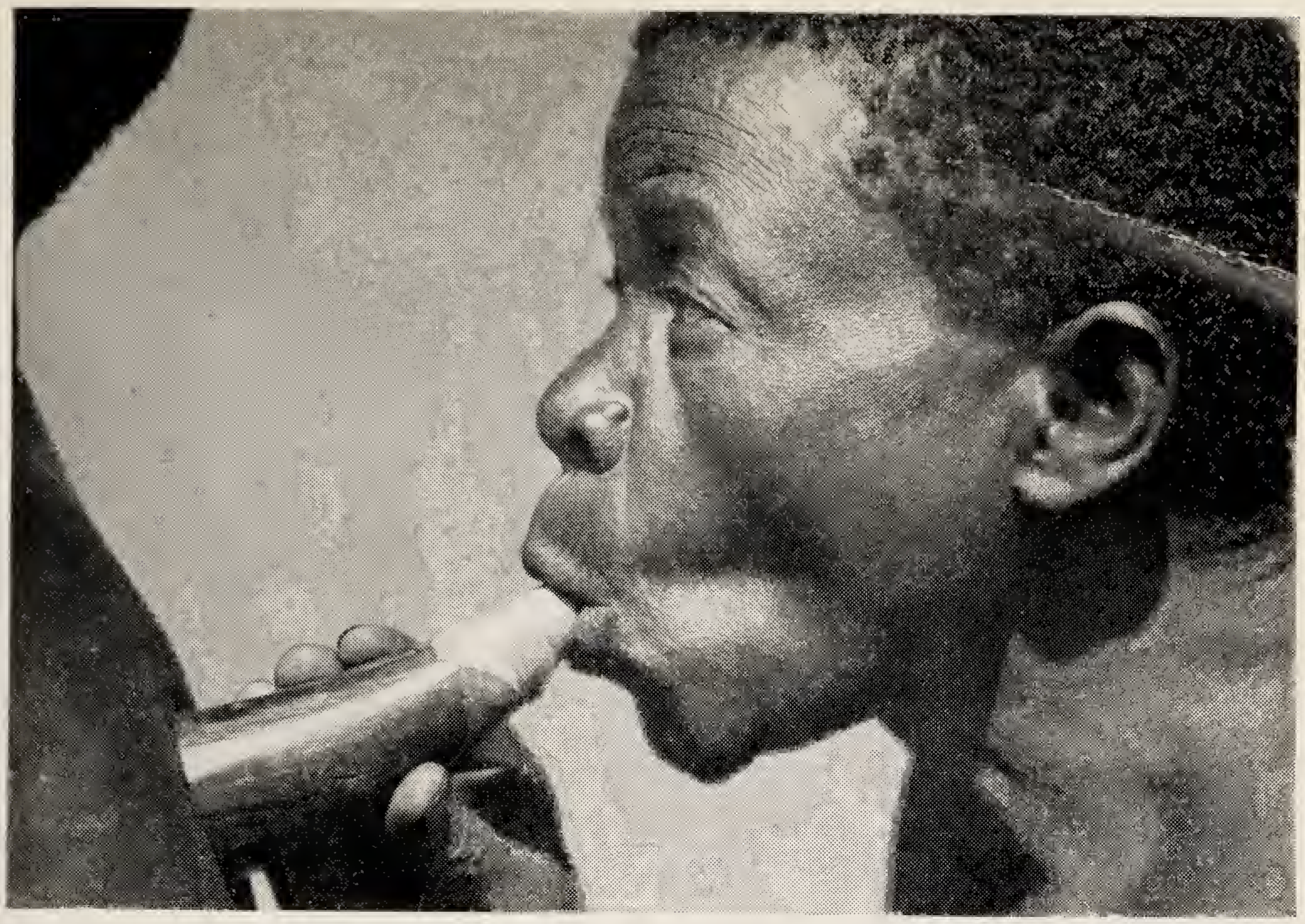


Plate I. TRADITIONAL "CUPPING": DRAWING BLOOD TO RELIEVE INTERNAL PAIN

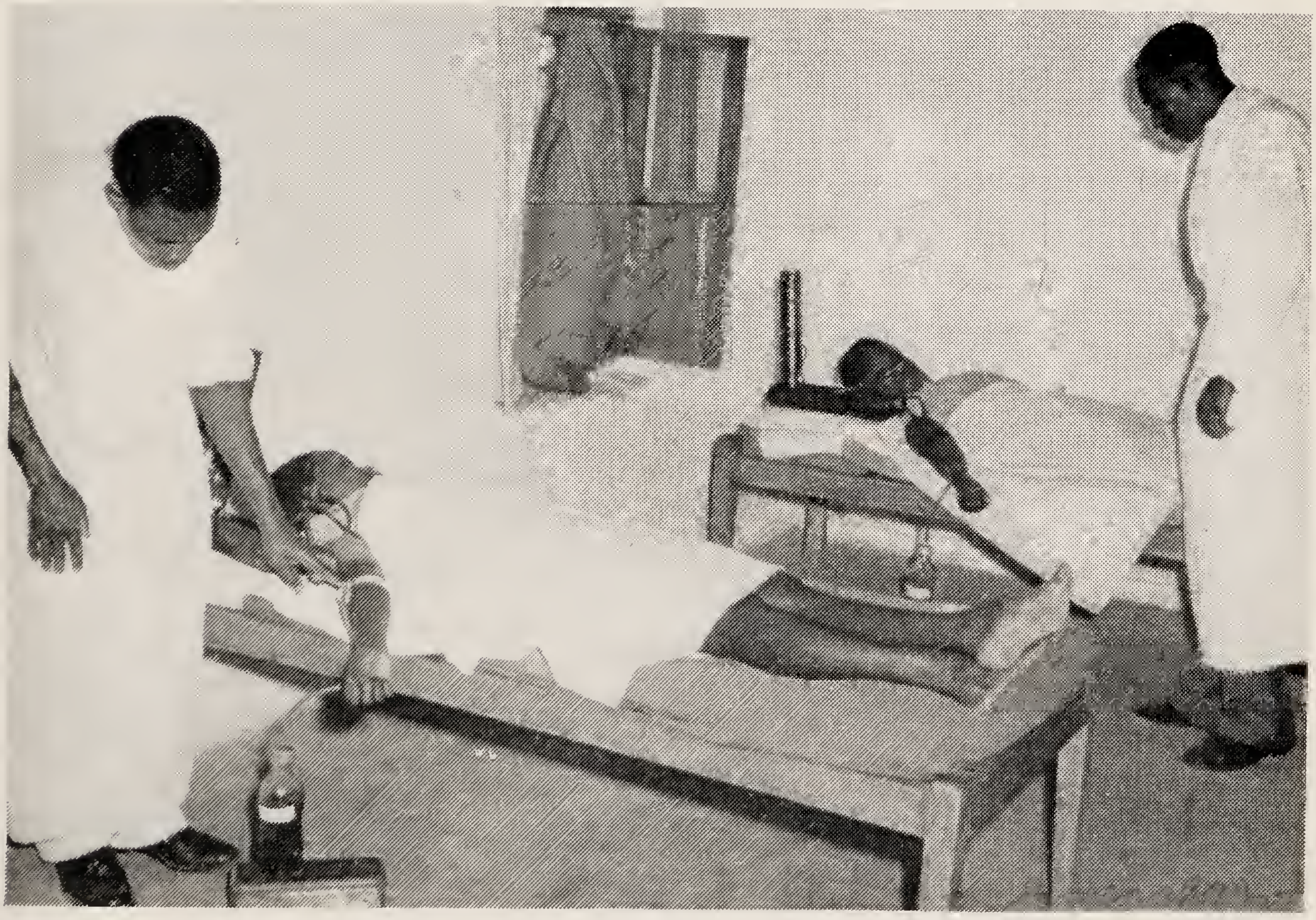
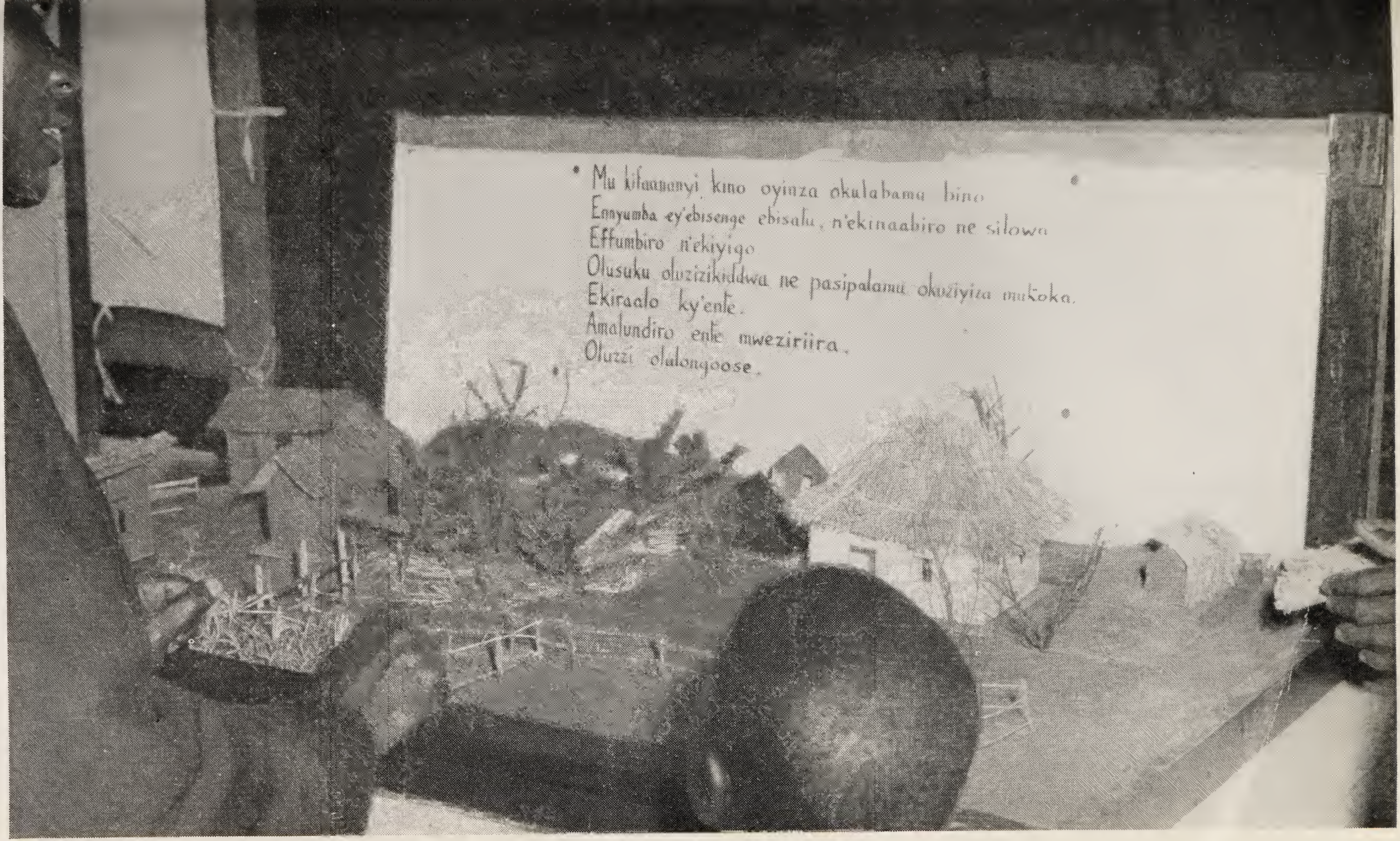


Plate II. BLOOD DONORS AT A RURAL COLLECTING CENTRE



Mu kifaananyi kino oyinza okulabamu bino
Ennyumba ey'ebisenge ebisalu, n'ekinaabiro ne silowa
Effumbiro n'ekiyigo
Olusuku oluzizikiddwa ne pasipalamu okuziyiza mukoka.
Ekiraalo ky'ente.
Amalundiro ente mweziriira.
Oluzzi olulongoose.

Plate IV. An Exhibit at a Health Show

Plate V. Anti-Malarial Work: Searching for Anopheline Larvae

Plate VI. Triplets Born at a Government Hospital leaves much to be desired. Accommodation is usually limited to a cell in the nearest police station or prison, where proper medical attention is difficult to arrange.

TABLE XVII

Admissions, Deaths and Discharges: Mental Hospital

Year	Lunacy cases heard by District Courts	Admissions		Deaths	Discharges
		New	Re-admissions		
1949 . .	266	199	19	49	74
1950 . .	326	268	27	77	131
1951 . .	377	297	43	112	191
1952 . .	519	307	27	121	222
1953 . .	433	350	26	209	205
1953 . .	*Criminal—*				
	Males . .	12	—	9	—
	Females . .	3	—	1	—
	Civil —				
	Males . .	247	—	148	143
	Females . .	88	—	51	62
	Europeans . .	—	—	—	—
	Asians	24	—	1	19
	Africans . .	352	—	208	186

TABLE XVIII

Number of Patients in Mental Hospital

End of	By Race			By Type and Sex				Total
				Civil		Criminal		
	Euro-pean	Asian	African	M	F	M	F	
1949	—	—	—	—	—	58		390
1950	—	8	469	288	125	50	14	477
1951	2	9	494	302	141	50	12	505
1952	—	8	488	282	150	52	12	496
1953	—	12	446	260	130	54	14	458

E. DENTAL SERVICE

A new dental centre was opened in Entebbe towards the end of 1952, and was equipped with X-ray apparatus in March 1953. Attendances have averaged 18 per working day. With the completed establishment of four dental surgeons none of whom was absent on vacation leave during the year, it was possible to devote more time to examination of school children and surveys.

In both Entebbe and Jinja, it was noted that two-thirds of the European school children needed immediate dental treatment. A comparison of European and African school children was striking; the proportion with caries was 100% in Europeans, and only 2% in Africans. It was also recorded that extractions among Europeans generally were more often necessitated by pyorrhoea than by caries. While European patients require extractions less commonly than fillings, the reverse holds true for African patients.

The visit of a dental surgeon to the Karamojong in the north-east corner of Uganda threw interesting light upon the condition of their teeth. A dental survey of this pastoral, semi-nomadic tribe in 1946 showed that only 6% of the children had signs of caries, a finding which was confirmed in 1953. A higher incidence of caries was found among adults, rising from 5% of all persons aged between 20 and 30 to 30% in those over 50 years age. The caries did not start in fissures, as among Europeans; it appeared to be secondary to attrition or trauma, allowing inter-dental packing of food particles, chiefly grains of sorghum. Trauma was noted in one-quarter of all persons; it was often restricted to one tooth, and seemed to be due to injury during calcification. An average of 2·7 teeth per mouth were missing. These were mainly the incisors, which are removed in accordance with tribal custom.

Elsewhere in Uganda, decay of the upper incisors, such as is common in European children, is being recorded more frequently. It has been suggested that this may be associated with the increasing consumption of refined sugar. The estimated amount of sugar (in tons) available for consumption in Uganda in recent years has been:—

1937 ..	11,100	1942 ..	18,700	1947 ..	14,000
1938 ..	14,500	1943 ..	20,300	1948 ..	16,700
1939 ..	14,700	1944 ..	19,400	1949 ..	18,300
1940 ..	11,200	1945 ..	12,000	1950 ..	19,200
1941 ..	20,000	1946 ..	12,700	1951 ..	31,200
				1952 ..	35,000

Posters illustrating measures of dental hygiene have been obtained from the Dental Board of the United Kingdom, for use in schools.

A summary of the work carried out is shown below:

	1951	1952	1953			
			Kampala	Jinja	Entebbe	Mulago
Extractions	1,481	1,754	858	380	1,156	9,604 (8,826)
Conservative treatment—						
Scalings	546	908	260	195	877	1,700 (535)
Fillings	1,321	1,929	773	698	1,529	584 (466)
Temporary fillings and dressings ..	425	507	395	62	299	
Crowns, inlays, etc. ..	28	50	13	35	7	—
Prostheses—						
New dentures ..	145	224	163	53	50	—
Repairs and alterations	116	183	122	109	53	—
Orthodontic appliances	3	37	45	3	21	—
Obturators and surgical appliances ..	1	6	4	—	2	13 (13)
TOTAL ATTENDANCES	4,568	6,200	2,818	2,093	4,176	14,454 (12,209)
African patients ..	—	—	—	88	729	14,109
Non-African	—	—	2,818	2,005	3,447	345

NOTE.—Data from Mulago for 1952 are shown in brackets, and are not included in the previous year's comparative total for all dental units.

Dental mechanics are posted to Kampala and Jinja only.

F. RADIOLOGICAL SERVICES

The training of African Assistant Radiographers began early in 1953. Nine students from secondary schools were enrolled, but five had subsequently to be rejected as unsuitable for training. The course of instruction will cover three years, and should provide men who are capable of operating small X-ray sets at district hospitals.

At present, only Mulago, Kampala, Jinja and Mbale Hospitals have radiological equipment. The Mbale set was unfortunately out of action for the greater part of the year. All dental units have X-ray apparatus. It is planned to install sets at other hospitals as electric power becomes available; stations in the west of Uganda are unlikely to be reached by the grid system for some time, and local generators will be necessary.

Useful experience was gained at Jinja. At first operated by a medical officer, the apparatus was not brought into full use until an assistant radiographer (Army-trained) was employed. Monthly visits by a radiographer from Kampala helped to ensure proper use and maintenance of the unit, as well as affording assistance in special examinations.

The number of patients examined at Mulago Hospital totalled 6,115; 921 were patients from Mission hospitals and 226 were referred by private practitioners. A total of 2,403 patients was examined at the European and Asian Hospital, Kampala.

Classification of patients examined at Mulago Hospital showed that the proportions needing a chest photograph (48·6%) or skeletal photograph (33·5% excluding skull) were higher than would be expected under United Kingdom conditions. Barium meals accounted for only 2·3% of examinations, but increasing use is being made of special forms of examination such as salpingograms and angiograms.

G. PHARMACEUTICAL SERVICES

Among special activities was the issue of standard sets of surgical instruments to district hospitals, obsolete instruments being withdrawn. It was still necessary to use the Entebbe pier store, which is in an advanced state of deterioration, to house materials of considerable value. During the course of the year pharmacists were able to visit all districts.

The value of antibiotics issued during the year was increased to £30,000; some districts had difficulty in arranging for the additional supplies to be used effectively, having regard to the staff available. The system of pricing indents was steadily improved, and has been of notable value in enabling medical officers to make the best use of their allocations for stores and equipment.

The Stores Advisory Committee did much constructive work during the year, including the preparation of a standard list of surgical instruments and a new type of indent form combined with issue voucher. The Pharmacy and Poisons Board, in addition to its statutory functions was in prolonged consultation with other East Africa territories over proposals for amendments to the legislation.

Increased precautions were found necessary to avoid misappropriations of stores, especially of antibiotics and textiles. Certain materials in the reserve stock were brought into circulation. The budgetary allocation for drugs and stores remained at about the same level. The prices of some articles showed a downward trend, the following being examples: —

PRICE

		1950	1951	1952	1953
		Shs. cts.	*Shs. cts.*	*Shs. cts.*	*Shs. cts.*
Quinine bisulphate ..	*per oz.*	2 83	3 41	3 92	2 17
Aspirin tablets ..	.. *per* 1,000	3 17	5 00	4 67	4 58
Cotton wool ..	.. *per lb.*	2 83	7 00	5 64	4 64
"Americani" ..	.. *per yard*	0 91	1 08	1 09	0 97
Blankets, blue ..	*each*	25 75	39 58	45 96	46 12
Bedsheets, unbleached ..	each	9 00	18 36	15 00	8 00

The work of the manufacturing section of the Medical Store reflects changing methods of treatment. The demand for bismuth injections has fallen sharply, while fluids for intravenous therapy are increasingly needed.

SUMMARY OF SOME PREPARATIONS MANUFACTURED

		1950	1951	1952	1953
Injections—					
Bismuth oxide	*litres*	979	1,262	956	114
Emetine hydrochloride ..	,,	36	10	9	—
Glucose	,,	257	501	485	999
Hydnocarpus oil	,,	2,708	1,119	1,921	767
Procaine	,,	17	26	14	17
Quinine	,,	109	211	232	134
Sulphathiazole	,,	26	25	12	6
Galenicals—					
Extracts	*pints*	510	403	132	207
Infusions	,,	408	465	—	236
Liniments	,,	4,827	3,872	4,212	3,168
Mixtures	,,	1,019	586	390	480
Ointments	*lb.*	24,733	10,026	9,691	6,979
Syrups	*pints*	945	335	—	—
Tinctures	,,	3,642	3,270	3,079	2,906
Insecticides—					
Benzoyl benzoate emulsion ..	,,	204	150	303	715
Bug spray	,,	1,843	—	—	—
B.H.C. spray	,,	160	—	352	288
B.H.C. powder	*lb.*	416	—	—	—
D.D.T. spray	*pints*	2,975	5,664	6,656	6,656
Pyrethrum spray	,,	1,560	1,944	1,056	2,880
Oil of hydnocarpus (external use)	*litres*	96	184	408	247
Narcotic preparations	*pints*	—	347	235	284

H. AMBULANCES AND TRANSPORT

In the course of 1953, many of the vehicles purchased during the war years were replaced, the general efficiency of the fleet being markedly improved as a result. It has been found desirable to replace ambulances by vans, which can perform a wider range of duties.

Differing opinions exist on the best type of vehicle for local conditions. Some medical officers favour strong, heavy vehicles, while others prefer more mobile light vans. Each type has advantages and disadvantages.

One district has plans to station vehicles at county headquarters, so as to be more readily available for the transport of patients from rural dispensaries to the main hospital. Under this arrangement, problems of supervision and maintenance will have to be solved. African local authorities have experienced difficulties in these respects; their services are naturally restricted by the small size of their fleets, and often by the absence of central servicing depots. The departmental repair garage at Entebbe has improved its scale of equipment and services. The elimination of so many worn-out vehicles has enabled more time to be devoted to preventive maintenance.

A standard first-aid box for motor omnibuses was approved, and proposals were considered for dormitories suitable for persons sleeping overnight at bus stations.

TABLE XIX

	1951	1952	1953	Average age
Vehicles in working order:	*No.*	*No.*	*No.*	
Ambulances	12	11	9	3.2 years.
Vans	17	16	21	3.1 years.
Vehicles not in working order:				
Ambulances	9	2	1	7·5 years.
Vans	1	2	—	—
No longer serviceable	4	4	1	7·8 years.
TOTAL VEHICLES ..	43	35	32	
New vehicles purchased	7	4	11	
Vehicles written off	4	12	14	

I. REGISTRATION OF PROFESSIONAL PERSONS

The Medical Practitioners and Dentists Ordinance was amended to provide for the registration of holders of the Licence in Medicine and Surgery granted by Makerere College who have completed the statutory period of internship; doctors who have been licensed for a minimum period of 5 years can also be registered if certified as suitable by a Board of Assessors. Four graduates of Makerere College were provisionally registered for internship purposes.

A summary of the entries in the various professional registers is given below: —

Names on Register	Number at 31–12–52	Names added in 1953	Names removed in 1953	Number at 31–12–53
Doctors—				
Registered	167	22	11	178
Provisionally registered . .	—	4	—	4
Licensed	82	4	7	79
Dentists—				
Registered	9	2	—	11
Licensed	1	1	—	2
Under permit	1	—	—	1
Pharmacists	12	7	—	19
Midwives—				
C.M.B. standard	123	12	12	123
Locally trained	632	23	3	652

Doctors at 31–12–53	REGISTERED				LICENSED			
	European	Asian	African	Total	European	Asian	African	Total
Government . .	54	4	1*	59	2	9	42	53
Other public service . .	17	—	—	17	—	1	—	1
Mission	20	—	—	20	—	—	1	1
Private	5	48	—	53	1	13	10	24
Total in Uganda . .	96	52	1	149	3	23	53	79
Not resident in Uganda	17	12	—	29	—	—	—	—
TOTAL . .				178				79

*Four others were provisionally registered

V—Laboratory Services

The range of routine examinations performed in hospital laboratories was extended, and increased facilities were provided for specialized work in the central laboratory. Structural alterations of the larger workrooms at the central laboratory were undertaken, providing more bench space and better facilities for histology, bacteriology and media-making. The main factor limiting the services is the supply of Africans suitable for training.

An increase in bacteriological work was associated with trials of chemotherapy in tuberculosis, undertaken in conjunction with the Medical Research Council. Since March, 1953, 37 patients have been admitted to the trials, cultures being made monthly from all patients and tests of sensitivity performed on all strains isolated. An inoculation cabinet with an ultra-violet lamp has been installed for the protection of those engaged in this work.

A new method of examining materials for suspected blood stains was introduced, depending upon the absorption of anti-human globulin. Absorption is detected by exposing Rh-sensitized cells to the serum used, and then applying Coombs' test to the cells. Of 246 exhibits submitted for examination, 150 were tested specifically for human blood, after application of the benzidine screening test; in 55 exhibits the ABO group was determined.

HISTOLOGICAL EXAMINATIONS AND AUTOPSIES

Fewer autopsy specimens were examined, 627 blocks being prepared as against 1,120 in 1952. Surgical specimens remained at about the same level, 1,588 being prepared (1,602 in 1952) from 1,115 specimens (1,190 in 1952).

Some of the interesting conditions noted among biopsy specimens were:

Kaposi's sarcoma (9 cases);
Calcifying epithelioma of the cheek;
Coenurus cyst of the conjunctiva;
Generalized scleroderma with pulmonary symptoms;
Traumatic neuroma not due to amputation (2 cases);
Osteitis fibrosa without parathyroidism.

Medico-legal autopsies performed at the request of the Police numbered 272. Nine hundred and ninety bodies were received in the Mulago mortuary from the hospital wards; 550 autopsies were carried out (including 61 medico-legal cases mentioned above). The work at Mulago is shared with pathologists of the Medical School, and subsequent analysis of records is carried out as part of a research project of the department of pathology.

TABLE XX

SUMMARY OF WORK DONE IN KAMPALA LABORATORIES

	1951	1952	1953
Bacteriological	3,066	3,595	3,475
Serological	1,643	1,691	1,885
Venereal diseases—			
Kahn tests	31,280	24,482	25,898
D.G. examination	—	—	3,970
Other tests	11,850	10,142	11,331
Haematological	16,346	20,512	17,518
Biochemical	3,543	2,827	2,803
Blood films for parasites	27,142	20,412	33,375
Urine examinations	4,062	4,400	3,411
Faeces, microscopical	7,862	8,214	10,982
Sputum	2,780	2,461	2,808
C.S.F. cytology	699	793	764
Histological blocks	2,656	2,722	2,215

Of the Kahn tests, 21% were positive, 27% doubtful, and 52% negative. Dark ground examinations, mostly performed in the male V.D. clinic, showed 58% positive; for gonorrhoea, 69% of smears examined in the male V.D. clinic and 19% of those examined in the gynaecological clinic were positive.

A similar dependence upon type of patient and reason for examination is shown in the percentages of blood slides reported as containing malaria parasites—these were 10% of non-African specimens, 18% of African specimens from in-patients and child welfare clinics where blood-slides are taken almost as a routine in every case, and 37% of out-patient specimens, taken only when malaria is suspected. For every thousand slides showing *P. falciparum,* 13 contained *P. malariæ,* 3 *P. vivax* and 1 *P. ovale*; thin films for species differentiation were not examined in all cases.

Township water supplies were examined bacteriologically on 100 occasions, 14 different supplies being reported upon; in addition, the samples from a brewery and swimming pool were examined. The replacement of routine bacteriological examinations of water by tests for residual chlorine was examined, and useful light was thrown upon the variability of some findings.

Report of the Government Chemist

WATER

One hundred and thirty nine samples of water were examined; 51 of these were for suitability for general use or for boiler feeds, 71 for residual chlorine, and 17 for fluorine content.

The fluorine content of water supplies received special attention. While too high a fluorine content causes mottling and dark staining of the teeth, addition of fluorine to waters which are deficient in this element affords some protection to the teeth of children against dental caries. The optimal concentration is held to be between 0·6 and 1·1 parts per million. The waters of Lake Victoria from Jinja westward contain only 0·25 p.p.m. Higher concentrations would be expected in water supplies from volcanic areas, particularly in association with limestone rocks containing fluorapatite; at Tororo and Sukulu, concentrations up to 1·2 p.p.m. have been found in bore-hole water. Lakes George and Edward have about 1 p.p.m.

FOOD

Added water was found in 69% of 97 samples of milk examined. The total of 194 food specimens included 43 of vegetable oil and 20 of maize meal.

POISONS

Among the poisons identified in forensic cases were arsenic, bismuth, phosphorus, morphine, barbiturates, cannabis sativa, alcohol and a Cassia purgative. In two-thirds of the cases of suspected poisoning, the results were negative (55 cases, 194 specimens). Twenty-five medical specimens or specimens of body fluids were examined for poison, identity or purity.

Other forensic examinations (44) included comparison of paint on vehicles involved in road accidents, identification of stains on clothing, and alcohol in body fluids or "waragi" (native spirits). Thirty-seven specimens and articles were examined for Customs and Excise purposes, including textiles, beer, spirits and denatured alcohol, brewing chemicals, and instruments for checking.

Miscellaneous samples (25) included mineral waters, beer, tobacco for nicotine content, old-seed cake and chemicals for water treatment.

MEDICAL RESEARCH

Some medical officers were able to carry out field investigations on a restricted scale. At Mbale, a study of the effect of milk on child growth was made under rather adverse conditions; preliminary surveys were undertaken by the medical officer engaged on nutrition duty.

Research is also carried out by specialized institutions such as the Virus Institute, by Medical Research Council workers on Mulago Hill, and by the medical staff of Mulago Hospital. Attention has been directed to pædiatric problems, kwashiorkor and protein metabolism in Africans. Plans for a metabolic ward made good progress. The ward and laboratory will be under Dr. R. F. A. Dean, the cost of the buildings will be met by the Nuffield Foundation, while equipment and nursing staff will be supplied by Government. References to other items of research are given in the list of scientific publications.

VI—Training Schools

Uganda Medical Department was founded in 1897, and for many years the rate of expansion of health and curative services was determined by the country's ability to employ professional and technical workers from overseas. Local training schemes had to await a supply of African boys and girls with adequate general education. The development of primary and secondary schools gradually changed the picture. Today, the Medical Department employs a staff of over 3,500, of whom some 92% are Africans. The growth of the services has been greatly accelerated over the past 25 years as a result of the policy of training Africans locally for the various branches of medical work.

Stimulated by the successful training of Africans for medical duties early in the 1914-1918 war, organized courses for Medical Assistants were started at the Mengo C.M.S. Hospital in 1917. In this pioneer work, the late Sir Albert Cook and his brother, Dr. J. H. Cook, took a prominent part. Later, training courses for midwives were introduced both at Mengo Hospital and at Nsambya Hospital (Franciscan Sisters) in the early twenties, followed by a course for African nurses at Mulago Government Hospital in 1924.

A major step in the evolution of medical training was the opening of a School for Senior Native Medical Assistants at Mulago Hospital in 1924. This School was part of Makerere College, and its establishment was mainly due to the energy and foresight of Major G. J. Keane, Dr. H. B. Owen, and Mr. D. G. Tomblings. Its object was to produce a medical worker capable of bearing some of the responsibilities of a trained doctor. The first men who completed the course in medicine, surgery and midwifery at the Mulago School were employed by the Medical Department in 1928. It soon became apparent that the products of the School were suitable for licensing as medical practitioners, and legislative provision for this purpose was made in 1932. The development of training facilities has gone forward steadily, and 75 doctors have been provided for the public service during the past 25 years. The Makerere College Medical School continues to use Mulago Government Hospital for clinical training; the standard approximates to that of a modern European medical school. Students come to it from all the East African territories, and the evolution of Makerere into an autonomous University College has culminated in the award of an appropriate medical qualification—the Licence in Medicine and Surgery (East Africa). Men who take this qualification, involving a seven-year course, are fully registrable as medical practitioners in Uganda and the other East African territories. The majority of doctors who have graduated at Makerere College are employed in the public services, a small number being in private practice. In addition to chairs in Anatomy and Physiology, Makerere College now has full-time teachers occupying chairs of Medicine, Surgery, Obstetrics and Gynæcology, and Pathology. First Assistants were appointed to these divisions in 1953, thus relieving the Government specialist staff of part of their teaching responsibilities. Up to 1946, the entire burden of pre-clinical and clinical training had been undertaken by Government officers.

In 1953, an amendment to the Medical Practitioners and Dentists Registration Ordinance enabled medical graduates of Makerere College to become registrable after two years internship. The amending ordinance contained provision for the registration of holders of the Diploma in Medicine awarded after the old six-year course, subject to their certification as suitable by a Board of Assessors. This new privilege of local registration has enhanced the status of the Makerere College qualification. In future, it is likely that an increasing proportion of medical graduates will elect to enter private practice, a trend which may lead to some difficulty in maintaining the establishment of qualified medical staff in the public service.

Up to the present, the training of midwives has been restricted to the mission schools at Mengo and Nsambya Hospitals. A course for midwives will shortly start at Mulago Government Hospital, where the completion of a new Hostel accommodating some 370 trained staff and students should provide a greater inducement for girls of suitable educational background to join the service.

Schools for the training of female nurses exist at Mulago Hospital and the two mission centres mentioned above. The course is one of three years, following which students sit an examination for the Government Certificate in Nursing. An Ordinance for the Registration of Nurses and Midwives has recently been prepared, and is expected to be enacted in the near future.

To meet the needs of rural dispensaries, a course for Medical Assistants was started in 1924 at Mulago Hospital. This school was transferred to Masaka in 1946, to enable the facilities at Mulago to be used exclusively for the training of female nurses. The course for Medical Assistants is designed to produce a class of worker who is not only a competent nurse but is capable of recognising and treating the commoner diseases of the country. A school for male Nursing Orderlies was opened at Lira Hospital in 1946; after a two-year course, students sit a Government examination for a Certificate in Nursing.

While the production of men and women trained in the task of caring for the sick was a fundamental step in the development of the medical service, it was not forgotten that no lasting improvement in standards of health could be achieved without health workers. A three-year course for African Assistant Health Inspectors was started at Mulago in 1936. This school was moved to Mbale in 1949, and now provides courses for both Assistant Health Inspectors and Hygiene Orderlies. The Hygiene Orderlies' course is to be extended to two years, and is directed towards the production of men with a good practical knowledge of building standards, the protection of water supplies, and other important aspects of environmental sanitation.

Other training courses for auxiliary staff include those for Laboratory Assistants (a three-year course at Kampala Central Laboratory); Dispensers (a three-year course at Mulago Hospital); and Assistant Radiographers (a three-year course at Mulago Hospital). The African Development Fund programme contains provision for the training of School Health Assistants, as well as for the expansion of existing training arrangements for classes of workers already mentioned; this programme will cost over £200,000, and work is well in hand. If candidates for training come forward in the required numbers, with a sense of vocation for public service, much can be accomplished towards the evolution of a healthy state, where wealth gained from the orderly use of natural resources can be employed for the welfare of the people.

TABLE XXI

TRAINING SCHOOLS—MEDICAL DEPARTMENT: 1953

	In training at start of year	New entrants	Abandoned course	Still training	Completed course
Medical Assistants—					
Masaka—					
1st year	—	22	—	22	—
2nd year	19	3	5	17	—
3rd year	17	—	2	—	15 (*a*)
TOTAL	36	25	7	29	15

(*a*) 10 passed final examination.

TABLE XXI—*continued*

TRAINING SCHOOLS—MEDICAL DEPARTMENT: 1953

	In training at start of year	New entrants	Abandoned course	Still training	Completed course
Nurses, female—					
Mulago—					
1st year	22	57 (*b*)	17	33	—
2nd year	51	—	16	53	—
3rd year	31	—	10	18	14 (*c*)
TOTAL ..	104	57	43	104	14
Nursing Orderlies—					
Lira—					
1st year	—	25	3	22	—
2nd year	17 (*d*)	—	—	—	16 (*e*)
TOTAL ..	17	25	3	22	16
Assistant Health Inspectors—					
1st year	—	12	2	10	—
2nd year	11	—	1	10	—
3rd year	11	—	—	—	11 (*f*)
TOTAL ..	22	12	3	20	11
Dispensers—					
Mulago—					
1st year	—	4	—	4	—
2nd year	5	—	2	3	—
3rd year	4	—	1	3	— (*g*)
Referred	2	—	—	—	2 (*h*)
TOTAL ..	11	4	3	10	2
Laboratory Assistants—					
Kampala—					
1st year	4	4	1	7	—
2nd year	2	—	—	2	—
3rd year	2	—	1	—	1
TOTAL ..	8	4	2	9	1
Assistant Radiographers—					
3-year course	—	9	5	4	—

(*b*) 47 passed Preliminary Training School Examination.

(*c*) 14 passed Final examination.

(*d*) Excluding 14 final year students accounted for in 1952.

(*e*) 16 passed Final examination.

(*f*) 9 passed Final examination.

(*g*) All candidates referred.

(*h*) Two passed in March 1953.

LEGISLATION

Dangerous Drugs Ordinance, Cap. 97

Legal Notice 108 adds 3-methoxy-N-methylmorphinan to the drugs included in the Dangerous Drugs (Application) Order on page 1480 of Volume VII of the Laws.

District Council Bye-Laws (African Local Governments Ordinance, Cap. 74)

Legal Notice 12 *A Bye-law to Control Eating Houses* passed by the Bugishu District Council, provides for permits to be issued on payment of a fee of Shs. 20 and after inspection by a health inspector or assistant, and lays down requirements which must be satisfied.

Factories Ordinance No. 5 of 1952

Legal Notice 25 postpones the operation of the provisions of the ordinance in certain cases until dates ranging from 1954 to 1958.

Legal Notice 73 *The Factories (Registration Fees) Rules* prescribes the fees for certificates of registration and provisional factory permits.

Legal Notice 127 *The Factories (Plant Examination Fees) Rules* prescribes fees for examination of steam boilers, including medical sterilizers.

General Notice 313 appoints members of the Factories Advisory Board.

General Notice 315 appoints inspectors for various sections of the ordinance.

General Notice 118 *The Factories (First Aid) Order* specifies the drugs and dressings which are required for factories according to the number of persons employed.

Factories (Amendment) Ordinance No. 3 of 1953

This ordinance makes minor typographical changes and provides powers under Section 55 to control the disposal of poisonous and noxious materials.

Hotels Ordinance No. 22 of 1952

Legal Notice 224 brought the Hotels Ordinance into force from 1st October, 1953.

Legal Notice 223 promulgates *The Hotels (Appeals) Rules.*

Legal Notice 248 sets out the forms of application for a Hotel Licence or a Licence to Manage a Hotel.

General Notice 998 appoints members of the Hotels Board.

Industrial Alcohol Ordinance, Cap. 224

Legal Notice 78 amends the Industrial Alcohol Rules by defining the method of denaturing Mineralised (Methylated) Spirit.

MEDICAL PRACTITIONERS AND DENTISTS (AMENDMENT) ORDINANCE NO. 19 OF 1953

This ordinance introduces provisional registration to cover the professional acts of medical graduates before they are fully registrable, and entitles Makerere licentiates of medicine to be registered after two years satisfactory hospital experience. A Board of assessors may certify licensed doctors who have been in the service for five years as suitable for registration.

Minor changes are made in the connotation of "public service", "Registrar" and "Chairman of the Board".

General Notice 915 appoints the Director of Medical Services as Registrar and Chairman of the Board.

MIDWIVES ORDINANCE, CAP. 95

General Notice 178 gives a list of Local Supervisory Authorities and their responsibilities.

PHARMACY AND POISONS ORDINANCE, CAP. 96

Legal Notice 41 corrects a misplaced decimal point in Legal Notice 224 of 1951.

Legal Notice 84 exempts the Aga Khan Health Centre, Kampala, from the provisions of Part II of the Ordinance by the operation of Section 18(c).

General Notice 362 sets out the persons authorized to give certificates under Section 21(c) for the sale of Part I poisons.

General Notice 363 gives a list of wholesalers registered under Section 25(2).

General Notice 364 gives a list of licensed sellers of poisons.

General Notice 365 provides an abbreviated list of Poisons whose sale is restricted, subject to specified exemptions.

General Notice 366 gives the names of pharmacists removed from the Register.

General Notice 367 gives a list of premises registered under Section 15.

General Notices 368 and 1036 give the names of registered pharmacists.

General Notice 1383 varies the appointments to the Pharmacy and Poisons Board.

PUBLIC HEALTH ORDINANCE, CAP. 98

Building Rules, 1951

Legal Notice 3 makes typographical and other amendments and provides for insulating against heat of habitable rooms roofed with metal roofing.

Legal Notice 44 exempts certain buildings for the housing of labour from the provisions regarding approval of plans and related matters.

Legal Notice 145 exempts rural primary schools from the operation of the Rules.

Legal Notice 240 increases the thickness of fire-resisting material required from $\frac{3}{4}''$ to $1\frac{3}{4}''$.

Legal Notice 296 alters the provisions for the drawings which have to be submitted, and substitutes a scale of inspection fees which takes into account the class of building.

Notifiable Diseases, Vol. VII, page 1487

Legal Notice 100 deletes ophthalmia neonatorum and puerperal fever from the list of notifiable diseases.

Eating House Rules, Vol. VII, page 1741 and Bake House Rules, page 1736.

Legal Notices 69 and 71 add Butiaba and Masindi Port to the townships in the first schedule of these Rules.

Appointment of Cemeteries and Authorised Cemeteries Vol. VII, page 1766.

Legal Notice 241 appoints a cemetery for Masaka.

Legal Notice 242 cancels Legal Notice 88 of 1932 and appoints a Mohammedan Cemetery for Kampala.

PUBLIC HEALTH (AMENDMENT) ORDINANCE NO. 28 OF 1953

This amending ordinance specifies the courts which have jurisdiction, deletes hospitals, colleges and schools from the definition of "public buildings"; and amends the procedure for dealing with nuisances in factories.

RABIES ORDINANCE, CAP. 159

Legal Notice 57 proclaims Mbale District under Section 2.

SLEEPING SICKNESS ORDINANCE, CAP. 100

Legal Notice 125 revokes the proclamation of the Madi and West Nile Infected Areas.

TOWN AND COUNTRY PLANNING ORDINANCE, NO. 25 OF 1951

Kampala

Legal Notice 302 appoints 1st January, 1954 for the control of the Kampala Planning Area in accordance with the provisions of the Ordinance.

General Notice 1096 notifies the approval by the Board of Kampala Detailed Scheme No. 1 (Allidina Visram Street) 1953, to come into force from 24th October, 1953.

General Notice 1034 gives notice of the deposit of the amended Kampala Scheme No. 2 (Jinja Road—de Winton Road Area) 1953. The original scheme was notified in General Notice 255.

General Notice 180 gives notice of the deposit of Kampala Detailed Scheme No. 3 (River Road Area) 1953.

General Notice 256 gives notice of the deposit of Kampala Detailed Scheme No. 4 (Wandegeya) 1953.

Jinja

Legal Notice 318 declares and defines the limits of the Jinja Planning Area.

General Notice 98 appoints the Jinja Planning Committee.

Hoima

General Notice 229 notifies approval of a planning scheme for Hoima Township.

Township Ordinance, Cap. 10

Legal Notice 303 declares Mukono a township.

Legal Notices 11 and 87 prohibit the keeping of cattle and other animals in Masindi and Kabale Townships, and cancels Legal Notice 124 of 1945.

General Notices 342 and 1392 appoint members of township boards in the Eastern Province and Northern Province respectively.

Uganda Employment Ordinance, Cap. 83

Legal Notice 49 exempts members of the Uganda Government Construction Corps from Rule 17 (Contract of Service).

Waterworks Ordinance, Cap. 130

Legal Notice 249 defines an additional authorised area for charges in respect of the Mbarara Water Supply.

Appendix II

SCIENTIFIC PUBLICATIONS
BY MEMBERS OF THE DEPARTMENT

Brown, J. Scott—"Some features of Ganda X-ray anatomy" *East African Medical Journal,* 30, 145.

Burkitt, D. P.—"A simple, serviceable artificial leg" *East African Medical Journal* 30, 177.

Hutton, P. W.—"Tuberculosis in Uganda" *N.A.P.T. Bull.* December, 1953, p. 207.

Hutton, P. W.—"The syndrome of Landry, Guillain and Barre" *East African Medical Journal* 30, 137.

Raper, A. B.—"Anthrax meningo-encephalitis" *East African Medical Journal* 30, 399.

Raper, A. B.—" Medical writing in East Africa" *East African Medical Journal,* 30, 315.

Raper, A. B.—"Nephritis and allied lesions in Central Africans. A contribution from autopsy work" *East African Medical Journal,* 30, 49.

Shore, H.—"A case of generalized vaccinia" *East African Medical Journal,* 30, 167.

Welbourn, H. F.—"Child welfare in Uganda" *Corona,* 5, 175.

SUMMARY OF REVENUE AND EXPENDITURE

	Revenue		Expenditure			
	Charges raised	Capitation fees	Personal Emoluments	Other charges	Special Expenditure	TOTAL
	£	£	£	£	£	£
1950 . .	12,838	4,575	334,478	217,656	9,227	561,361
1951 . .	16,607	5,894	422,986	250,029	74,779	747,794
1952 . .	28,190	7,073	460,130	370,026	77,826	907,982
1953 . .	32,868	7,912	499,472	415,519	45,486	960,477

N.B.—Casual labour is included under Personal Emoluments for comparison purposes.

1952	**Revenue**	1953	
Actual		Estimated	Actual
£		£	£
	CHARGES FOR SERVICES RENDERED—		
18,139	Hospital charges	15,000	14,780
1,213	Medical and dental charges . .		
	SERVICES SUBJECT TO PART REPAYMENT TO OFFICERS—		
5,964	Medical and dental fees	8,600	14,674
2,874	Workmen's Compensation cases	2,000	2,854
28,190	TOTAL REVENUE COLLECTED £	25,600	32,868
	CAPITATION FEE—		
4,079	East African Railways and Harbours . .	4,300	7,912
3,334	Other bodies	2,800	
	CONTRIBUTIONS FROM AFRICAN LOCAL GOVERNMENTS—		
2,200	Buganda—Medical stores	2,200	(2,200)
570	Salary of A.M.O. at Kabarole hospital . .		
	OTHER—		
	East African Railways and Harbours—		
187	Anti-malarial clearings	33	(33)
98	Sleeping sickness clearings	142	(142)
5,000	Other East African Governments for Mulago Teaching Hospital	7,500	7,350
	COLONIAL DEVELOPMENT AND WELFARE SCHEMES—		
28,000	D.1351 Medical Department	40,000	40,000
71,658		82,575	90,505
	Expenditure		
	STAFF—		
432,797	Personal emoluments (graded staff) . .	508,758	468,475
27,333	Casual labour	35,444	30,997
45,390	Transport of staff and patients	47,470	51,162
3,601	Repayments of private fees to Government practitioners	4,000	5,856
1,696	Payments to Government practitioners . .	1,000	619
194	Payments to private practitioners and nurses	500	467
1,871	Courses of instruction	1,200	537
10	Staff recreation fund, Mulago	10	10
—	Assistance for research	500	—
	MATERIALS—		
258,576	Stores, drugs and equipment	235,000	235,395
1,871	Transport of stores	1,989	1,868
234	Incidentals	184	158
499	Publications	450	380

SUMMARY OF REVENUE AND EXPENDITURE—*continued*

1952	**Expenditure**—*continued*	1953	
Actual		Estimated	Actual
£		£	£
	UPKEEP—		
56,185	Maintenance of hospital and laboratories	65,060	64,723
2,046	Rations for probationer nurses . .		
5,714	Water	5,600	6,570
11,083	Electricity	15,695	14,526
3,622	Postal services	4,155	4,812
339	Non-African mental patients	250	234
	HYGIENE—		
5,659	Control of disease	8,425	9,614
399	Propaganda	550	493
	CONTRIBUTIONS TO MISSIONS—		
6,175	Training schools	7,875	6,775
7,043	Leprosy settlements	5,650	6,870
500	Kabarole hospital	500	500
80	Scholarships	100	100
	SPECIAL EXPENDITURE—		
675	Motor vehicle	—	—
1,000	Building grants	4,750	4,750
94	Water supplies	—	—
	OTHER CONTRIBUTIONS—		
100	B.R.C.S. Blood Transfusion Service . .	100	100
	SPECIAL EXPENDITURE—		
17,481	New equipment, hospitals and dispensaries	35,140	22,024
—	New equipment, training schools	1,000	903
—	New equipment, training radiographers . .	500	369
—	New equipment, dental anaesthetic . .	220	220
4,361	X-ray equipment, Mulago	—	—
346	Office equipment	—	—
5,082	Purchase of motor vehicles	9,753	8,846
—	Fire protection	2,000	2,000
5,954	Simulium eradication	2,500	960
42,833	Reserve stocks	10,923	10,164
£907,982	TOTAL MEDICAL DEPARTMENT £	1,014,791	960,477
	FORESTRY DEPARTMENT—		
120	Anti-malarial	—	—
	PUBLIC WORKS DEPARTMENT—		
139,802	New buildings and extensions	357,647	272,419
5,302	Minor works and maintenance	(5,700)	(5,700)
1,051	Maintenance of temporary buildings . .	1,255	(1,255)
250	Water Supply, Ngora hospital	250	250
	TOWNSHIPS AND MUNICIPALITY—		
8,414	Mosquito control	12,537	(12,537)
20,436	Kampala, Public Health Department . .	34,866	34,866
	PROVINCIAL ADMINISTRATION—		
1,938	Sleeping sickness inspectors	1,715	(1,715)
11,537	Sleeping sickness clearings	13,517	(13,517)
	MISCELLANEOUS—		
20,120	Passages	—	—
4,092	Travelling on leave in East Africa . .	—	3,365
150	Rhodes Centenary Exhibition	—	—
	SUBVENTIONS—		
7,000	East Africa High Commission services . .	14,592	
—	Makerere College Medical School . .	—	—
724	Others	651	—
	POST-WAR DEVELOPMENT RESERVE FUND— (Public Works Extraordinary)		
—	Hostel for ambulant sick, Kampala . .	10,000	—

STAFF

HONOURS

JOHN OKIDI, *Medical Assistant*, awarded the Certificate of Honour.
ABUNERI GUBAYANGA, *Assistant Health Inspector*, awarded the Certificate of Honour.

POST-GRADUATE DIPLOMAS

DUFF, A. R.	D.P.H. (*Edin*). June, 1953.
MUSOKE, L. K.	D.C.H. (*Eng*). February, 1953.
NELSON, G. S.	D.T.M.&H. (*L'pool*) (with Gold Medal) May, 1953.
WILLIAMS, W.	D.T.M.&H. (*Eng*). February, 1953.

SENIOR STAFF

Director	R. S. F. Hennessey, B.A., M.D., F.R.C.P.I., Dip.Bact. D.T.M.&H.
Deputy Director	J. K. Hunter, M.B., D.T.M.&H., D.P.H.
Assistant Director	A. J. Board, M.B., D.T.M., D.P.H.
Medical Superintendent, Mulago Hospital	A. A. Alderdice, M.B., M.R.C.P.
Specialists:—	
Physicians	H. C. Trowell, M.D., F.R.C.P. P. W. Hutton, M.D., M.R.C.P., D.T.M.&H.
Surgeons	I. W. J. McAdam, M.B., F.R.C.S. D. P. Burkitt, M.D., F.R.C.S.
Ophthalmologist	A. J. Boase, O.B.E., F.R.C.S., D.O.M.S.
Radiologist	J. Scott Brown, M.D., D.T.M.&H., D.M.R.E.
Alienist	G. Campbell Young, M.R.C.S., D.P.M.
Anaesthetist	H. R. Hudd, B.SC., M.B., M.R.C.S., D.A.
Leprologist	J. A. K. Brown, B.SC., M.D., M.R.C.S., D.T.M.&H.
Gynaecologist	H. N. Mansfield, M.D., M.R.C.S., M.R.C.O.G.
Senior Medical Officers	W. A. Wilson, M.D., M.R.C.S., D.P.H., D.T.M.&H. D. G. Snell, M.B., M.R.C.S., D.P.H., D.T.M.&H. W. Barnetson, M.B., D.T.M.&H. J. M. Caldwell, B.A., M.B., D.P.H., D.T.M&H. A. F. Fowler, M.R.C.S., D.P.H., D.T.M.&H. R. G. Ladkin, M.B.E., M.A., B.M., D.P.H.
Senior Pathologist	A. B. Raper, B.SC., M.D., M.R.C.P., D.T.M.&H.
Entomologist	G. R. Barnley, M.SC.
Chief Matron	Miss M. O. C. Bonthron, S.R.N., S.C.M., R.F.N., Diploma in Nursing.
Chief Pharmacist	J. C. Baird, M.P.S.
Chief Health Inspector	E. J. Hines, M.R.San.I., A.M.I.San.E.
Secretary	E. J. Kennard.

APPOINTMENTS AND PROMOTIONS

Board, Dr. A. J.	Assistant Director	31/ 7/53
	Acting Deputy Director	27/ 8/53—15/ 9/53
Byrne, Dr. J. A.	Medical Officer *on transfer*	not yet arrived.
Chandler, Miss M.	Matron Grade II, *on transfer*	26/ 7/53
Curtis, Miss Z.	Nursing Sister	6/ 9/53
Dunn, Miss K.	Nursing Sister	8/11/53.
Eddie, T.	Radiographer	27/ 2/53
Farr, S. J.	Health Inspector	9/ 1/53
Finnie, Miss V. H.	Nursing Sister	30/ 6/53
Gerry, A. R.	Assistant Hospital Superintendent	2/ 3/53
Gibson, T. E.	Health Inspector	1/11/53
Goldsmith, Miss A. M.	Nursing Sister, *on transfer*	30/ 4/53
Gorse, Miss E. J.	Receptionist Secretary	25/10/53
Hadija, Dr. K. G.	Medical Officer	5/ 6/53

APPOINTMENTS AND PROMOTIONS—*continued*

Hilton, A.	Health Inspector	16/ 2/53
Hoar, Dr. C. E. W.	Acting Senior Pathologist	27/ 4/53— 9/11/53
Hopwoood, Dr. B. E. C.	Medical Officer, *reversion from Municipality of Kampala*	14/ 1/53
Howe, Miss L. E. G.	Welfare Worker	23/ 1/53
Hunter, Dr. J. K.	Acting Director of Medical Services	11/ 7/53—15/ 9/53
Johnstone, J. E.	Health Inspector	6/ 2/53
Kolgaonker, Dr.	Medical Officer (L.C.S.)	9/11/53
Kiboneka, Dr. G. H.	Assistant Medical Officer	20/ 7/53
Lanceley, G.	Male Mental Nurse	18/12/53
Ladkin, Dr. R. G.	Acting Provincial Medical Officer	1/ 1/53—25/7/53
Magambo, Dr. J. C.	Assistant Medical Officer	9/ 1/53
Mason, Miss H. E. V. E.	Nursing Sister, *on transfer*	21/10/53
Morris, Miss J. E.	Nursing Sister	5/12/53
Pitts, J. W.	Health Inspector	28/ 9/53
Rae, Miss A. E.	Nursing Sister	11/ 3/53
Rees, Miss D. H.	Pharmacist	8/ 1/53
Scherer, J. A.	Acting Superintendent Mental Hospital	12/3/53—30/10/53
Sickling, F. W.	Assistant Hospital Superintendent	18/11/53
Thomson, Dr. A. W. H.	Medical Officer	22/ 3/53
Torbet, D.	Radiographer	31/ 5/53
Twohig, Dr. J. N.	Acting Senior Medical Officer	30/ 5/53
Welchman, Dr. J. M.	Medical Officer	4/ 5/53
White, Miss B. H.	Nursing Sister	21/10/53
Wilson, Dr. W. A.	Acting Assistant Director	1/1/53—10/7/53
	Acting Deputy Director	11/7/53—26/8/53
	Acting Assistant Director	27/8/53—15/ 9/53
Wynne, Miss M. D.	Nursing Sister	24/ 3/53

DEPARTURES

Alexander, Miss C. J.	Nursing Sister, *on leave pending resignation*	7/10/53
Allen, Miss B.	Nursing Sister, *resigned*	7/12/53
Brisland, Miss P. I. V.	Nursing Sister, *resigned*	30/ 3/53
Brewer, Miss P. J.	Nursing Sister, *resigned*	13/ 8/53
Cashmore, Miss R. M.	Nursing Sister, *resigned*	30/11/53
Dentith, Miss A. J. M.	Nursing Sister, *resigned* with effect from	5/ 4/54
Dixon, Miss V. S.	Nursing Sister, *resigned*	4/12/53
Gopal, Dr. B.	Senior Sub-Assistant Surgeon, *retired*	18/ 1/54
Hewlett-Parker, J. L.	Radiographer, *retired*	13/ 8/53
Kagezi, Dr. S. M.	Senior Assistant Medical Officer, *boarded out*	7/ 5/53
Kanyarutoke, Dr. N. N.	Assistant Medical Officer, *left the service*	2/10/53
Kiseka, Dr. S. B. M.	Assistant Medical Officer, *resigned*	15/ 1/53
Kunuka, Dr. B. N.	Assistant Medical Officer, *resigned*	21/ 1/53
Langford, Dr. C. C.	Medical Officer, *resigned*	3/ 3/53
MacKichan, Dr. I. W.	Senior Medical Officer, *transferred*	15/ 4/53
Majugo, Dr. I. K.	Assistant Medical Officer, *resigned*	31/ 3/53
Masson, Miss M. R.	Nursing Sister, *resigned*	9/10/53
Murray, Dr. J. P.	Medical Officer, *resigned*	20/12/53
Packham, Miss F. M.	Nursing Sister, *resigned*	11/ 4/53
Postlethwaite, G. H.	Senior Health Inspector, *retired* with effect from	26/ 3/54
Rae, Miss A. E.	Nursing Sister, *resigned with effect from*	14/12/53
Stalker, Miss M. W.	Nursing Sister, appointment terminated by ill-health	1/9 /53
Sutcliffe, Miss J.	Nursing Sister, *resigned*	31/ 5/53
Taylor, Miss M. P.	Nursing Sister, *resigned*	31/ 8/53
Walker, Miss J.	Nursing Sister, *resigned*	15/12/53
Weatherhead, Miss A. M.	Nursing Sister, *resigned*	7/11/53

ESTABLISHMENT, 1953 APPENDIX V

(Sanctioned Establishment and Vacancies)

ADMINISTRATION

EXPATRIATE POSTS

1 Director of Medical Services.
1 Deputy Director.
1 Assistant Director.
6 Senior Medical Officers.
1 Administrative Assistant.
2 Accountants.
5 Stenographers.

LOCAL CIVIL SERVICE POSTS

2 Chief Clerks (Special class).

GENERAL

1 Medical Superintendent.
2 Specialists, Physicians
2 Specialists, Surgeons.
1 Specialist, Ophthalmologist.
1 Specialist Gynaecologist.
1 Specialist, Anaesthetist
1 Specialist, Leprologist.
40 Medical Officers (2 *vacancies*)
1 Hospital Superintendent
5 Assistant Hospital Superintendents (1 *vacancy*).
1 Welfare Worker.
3 Hospital Assistants.

4 Medical Officers (L.C.S.).
3 Senior Sub-Assistant Surgeons.
6 Sub-Assistant Surgeons.
5 Senior Assistant Medical Officers.
56 Assistant Medical Officers (11 *vacancies*).
1 Assistant Medical Officer (Blind Physiotherapist).
14 Clerks (Executive Class).
63 Clerks (Clerical Class).
2 Hospital Cooks.
77 Clerical Assistants and Clinical writers.
5 Artisans.
1 Mechanic (Lift attendant) (*vacant*)

NURSING

1 Chief Matron.
2 Matrons, Grade I.
5 Matrons, Grade II.
60 Nursing Sisters (13 *vacancies*, 10 filled by temporary appointments).
2 Physiotherapists.
1 Housekeeper.

15 Asian Nurses and Midwives.
320 Nurses and Midwives (filled by 125 Midwives, 91 Nurses and 26 Nurse Midwives).
274 Medical Assistants (36 *vacancies*).
122 Senior Nursing Orderlies. (20 *vacancies*).
681 Nursing Orderlies.
211 Ward Maids.

LABORATORY AND ENTOMOLOGICAL

1 Senior Pathologist.
3 Pathologists.
2 Government Chemists (1 *vacancy*).
3 Senior Entomologists and Entomologists (1 *vacancy*).
4 Laboratory Technicians (1 *unadvertised vacancy*).
1 Assistant Bacteriologist.

1 Laboratory Technician.
57 Laboratory Assistants (8 *vacancies*).
3 Entomological Assistants.
31 Laboratory Orderlies.
7 Entomological Observers.
1 Chemical Assistant.

PHARMACEUTICAL

1 Chief Pharmacist.
4 Pharmacists (1 *vacancy*).
2 Storekeepers.

1 Assistant Storekeeper (Executive class).
48 Dispensers (6 *vacancies*).
1 Clerk (Special Class).
9 Assistant Medical Storekeepers (9 *vacancies*).

RADIOLOGICAL

1 Specialist Radiologist (*vacant*).
4 Radiographers (2 *vacancies*).
1 Receptionist-Secretary.

HYGIENE

1 Chief Health Inspector.
21 Senior Health Inspectors and Health Inspectors (5 *vacancies*).
4 Sanitary Overseers (1 *vacancy*)
1 Instructor of Hygiene.

99 Assistant Health Inspectors (10 *vacancies*).
113 Hygiene Orderlies (19 *vacancies*).
61 Health Orderlies.

DENTAL

EXPATRIATE POSTS

4 Dental Surgeons.
2 Dental Mechanics.

LOCAL CIVIL SERVICE POSTS

3 Dental Orderlies.

MENTAL HOSPITAL

1 Specialist (Alienist)
1 Superintendent.
4 Male Nurses
1 Sister-in-Charge.
1 Female Nurse.

19 Male attendants.
14 Female attendants.
78 Male Mental Orderlies.
44 Female Mental Orderlies.

TRANSPORT

1 Mechanic.
1 Vehicle Mechanic.
1 Driver (General Division).
42 Drivers (Employees Division) (5 *vacancies*).

TRAINING SCHOOLS

1 Instructor of Hygiene
2 Medical Officers
3 Nursing Sisters
1 Health Inspector
} Included above.

159 Learners L.C.S.
147 Female nurses in training.

N.B.—All vacancies for European staff are counted at the end of the year. Other grades are counted during the year.

APPENDIX VI (A)

PATIENTS ATTENDING GOVERNMENT HOSPITALS— OUT-PATIENTS, 1953

	Africans	Asians	Europeans	Males	Females	TOTAL
1. Tuberculosis of the respiratory system	257	4	—	175	86	261
2. Other tuberculous disease	32	6	—	23	15	38
3. Syphilis	22,715	8	2	12,947	9,778	22,725
4. Gonorrhoea	16,645	12	2	11,606	5,053	16,659
5. Other venereal diseases	3,887	4	3	2,091	1,803	3,894
6. Unspecified fevers	21,126	109	102	16,866	4,471	21,337
7. Bacillary dysentery	2,062	41	28	1,590	541	2,131
8. Amoebic dysentery	843	24	19	519	367	886
9. Diphtheria	1	—	1	1	1	2
10. Whooping cough	779	14	8	394	407	801
11. Meningitis	14	1	—	4	11	15
12. Plague	—	—	—	—	—	—
13. Leprosy	232	—	—	170	62	232
14. Tetanus	—	—	—	—	—	—
15. Anthrax	7	—	—	5	2	7
16. Acute Poliomyelitis	14	—	—	7	7	14
17. Smallpox:						
(*a*) Variola major	—	—	—	—	—	—
(*b*) Variola minor	12	2	—	10	4	14
18. Measles	305	8	32	247	98	345
19. Mumps	607	18	15	494	146	640
20. Malaria—						
(*a*) Benign tertian	46	5	18	44	21	65
(*b*) Quartan	152	15	2	112	57	169
(*c*) Malignant tertian	21,068	522	154	13,643	8,101	21,744
(*d*) Other unclassified	60,088	1,379	113	38,768	22,812	61,580
21. Blackwater fever	—	—	1	—	1	1
22. Schistosomiasis—						
(*a*) Vesical	53	1	1	54	1	55
(*b*) Intestinal	615	1	—	370	246	616
23. Onchocerciasis	64	2	—	62	8	70
24. Ankylostomiasis	5,287	23	1	2,971	2,340	5,311
25. Guinea worm	320	—	—	264	56	320
26. Other helminthic diseases	7,638	39	49	4,836	2,890	7,726
27. Relapsing fever	5	—	2	7	—	7
28. Yaws	14,700	4	—	9,202	5,502	14,704
29. Chicken pox	1,052	2	8	678	384	1,062
30. Trachoma	4,018	53	—	2,169	1,902	4,071
31. Other diseases of eye (except Ophthalmia neonatorum)	23,978	298	96	15,803	8,569	24,372
32. Trypanosomiasis—						
(*a*) Gambiense	—	—	—	—	—	—
(*b*) Rhodesiense	—	—	—	—	—	—
(*c*) Unspecified	—	—	—	—	—	—
33. Tinea	1,085	19	38	709	433	1,142
34. Scabies	9,642	27	3	6,464	3,208	9,672
35. Tumours—						
(*a*) Malignant (including leukaemia)	32	1	—	17	16	33
(*b*) Benign and unspecified	200	9	13	92	130	222
36. Asthma	503	149	20	511	161	672
37. Diabetes	14	49	8	48	23	71
38. Vitamin deficiency states	342	13	10	223	142	365
39. Diseases of blood and blood forming organs	2,424	217	40	1,466	1,215	2,681

OUT-PATIENTS, 1953—*continued*

	Africans	Asians	Europeans	Males	Females	Total
40. Cerebral vascular lesions	1	—	3	2	2	4
41. Mental disorders . .	44	15	19	43	35	78
42. Epilepsy	85	6	1	66	26	92
43. Other diseases of nervous system	1,843	152	167	1,448	714	2,162
44. Diseases of ear and mastoid sinus	8,235	151	186	5,437	3,135	8,572
45. Diseases of the circulatory system—						
(*a*) Heart disease . .	326	31	3	192	168	360
(*b*) Others	318	41	47	220	186	406
46. Pneumonia—						
(*a*) Lobar pneumonia . .	208	21	3	150	82	232
(*b*) Bronchopneumonia	223	60	1	177	107	284
47. Other diseases of respiratory system	62,235	1,671	1,006	44,407	20,505	64,912
48. Diseases of teeth and gums:						
(*a*) Caries	12,075	149	37	7,624	4,637	12,261
(*b*) Others	7,634	81	39	5,127	2,627	7,754
49. Appendicitis	3	13	20	20	16	36
50. Intestinal obstruction and hernia	2,390	3	17	2,091	319	2,410
51. Gastro-enteritis (over 4 weeks of age) . .	10,952	159	159	6,877	4,393	11,270
52. Cirrhosis of the liver . .	24	1	—	19	6	25
53. Other diseases of liver and bile passages . .	65	29	29	78	45	123
54. Other diseases of digestive system	46,861	681	487	28,949	19,080	48,029
55. Nephritis	44	8	3	43	12	55
56. Hydrocele	382	7	1	390	—	390
57. Other diseases of genito-urinary system . .	5,591	244	173	1,729	4,279	6,008
58. Diseases of pregnancy, child birth and the puerperal state—						
(*a*) Abortion . .	93	23	12	—	128	128
(*b*) Toxaemia of pregnancy	—	14	4	—	18	18
(*c*) Others	202	82	87	—	371	371
59. Arthritis and rheumatism	18,054	156	58	12,218	6,050	18,268
60. Chronic ulcer of leg . .	21,215	10	3	16,873	4,355	21,228
61. (*a*) Other diseases of skin	25,754	597	726	17,806	9,271	27,077
(*b*) Other diseases of musculo-skeletal system	9,961	309	277	7,045	3,502	10,547
62. Congenital malformations and diseases of early infancy	—	1	—	1	—	1
(*a*) Diarrhoea of new-born	1,628	29	1	1,024	634	1,658
(*b*) Ophthalmia neonatorum	20	2	—	16	6	22
(*c*) Immaturity . .	14	2	1	7	10	17
(*d*) Others	380	51	15	246	200	446
63. Fractures and dislocations, except where classifiable under item (64) . .	1,231	80	74	1,109	276	1,385
64. Injuries by animals or insects	1,868	37	145	1,499	551	2,050
65. Other wounds and superficial injuries (excluding burns)	50,003	735	249	41,571	9,416	50,987

OUT-PATIENTS, 1953—*continued*

	Africans	Asians	Europeans	Males	Females	TOTAL
66. Effects of foreign bodies ..	1,660	35	8	1,201	502	1,703
67. Burns and scalds ..	5,851	65	37	3,682	2,271	5,953
68. Poisoning	51	11	—	27	35	62
69. All other injuries from external causes ..	15,134	568	213	12,167	3,748	15,915
70. (i) Examinations and prophylactic injections ..	102,725	1,983	1,561	49,422	56,847	106,269
(ii) Ill-defined conditions	14,916	2,163	2,112	10,819	8,372	19,191
TOTAL ..	653,163	13,555	8,773	427,484	248,007	675,491

IN-PATIENTS AT GOVERNMENT HOSPITALS, 1953

APPENDIX VI (B)

International List No.		Disease	Patients						Deaths		
			Africans	Asians	Europeans	Male	Female	TOTAL	Male	Female	TOTAL
A.	1.	Tuberculosis of respiratory system	382	19	—	293	108	401	63	15	78
A.	2.	Tuberculosis of meninges and central nervous system	11	3	—	9	5	14	4	2	6
A.	3.	Tuberculosis of intestines, peritoneum and mesenteric glands	20	1	—	14	7	21	2	—	2
A.	4.	Tuberculosis of bones and joints	68	—	—	48	20	68	5	2	7
A.	5.	Tuberculosis, all other forms	57	1	—	46	12	58	7	1	8
A.	6.	Congenital syphilis	160	—	—	92	68	160	16	11	27
A.	7.	Early syphilis (I and II)	780	—	—	500	280	780	—	—	—
A.	8.	Tabes dorsalis	1	—	—	1	—	1	—	—	—
A.	9.	General paralysis of insane	23	1	—	23	1	24	3	—	3
A.	10.	All other syphilis	234	3	—	162	75	237	4	1	5
A.	11.	Gonoccocal infections—									
		(*a*) Genito-urinary	2,506	—	1	1,551	956	2,507	28	4	32
		(*b*) Ophthalmic	61	—	—	45	16	61	—	—	—
		(*c*) Other forms	232	—	—	170	62	232	3	—	3
A.	12.	Typhoid fever	741	10	13	531	233	764	64	31	95
A.	13.	Paratyphoid fever and other Salmonella infections	9	1	—	5	5	10	—	—	—
A.	14.	Cholera	—	—	—	—	—	—	—	—	—
A.	15.	Brucellosis (Undulant fever)	4	—	—	3	1	4	—	1	1
A.	16.	(*a*) Bacillary dysentery	1,088	10	19	728	389	1,117	17	9	26
		(*b*) Amoebiasis (excluding symptomless cyst carriers)	388	9	17	261	153	414	8	5	13
		(*c*) Other unspecified forms of dysentery	231	3	10	155	89	244	2	3	5
A.	17.	Scarlet fever	3	—	—	2	1	3	—	—	—
A.	18.	Streptococcal sore throat	50	—	29	49	30	79	—	—	—
A.	19.	Erysipelas	5	—	2	4	3	7	—	—	—
A.	20.	Septicaemia and pyaemia	30	1	—	19	12	31	4	4	8
A.	21.	Diphtheria	3	5	1	4	5	9	—	1	1
A.	22.	Whooping cough	401	3	1	159	246	405	6	11	17
A.	23.	Meningococcal infections	52	—	—	33	19	52	9	9	18
A.	24.	Plague	—	—	—	—	—	—	—	—	—
A.	25.	Leprosy	28	—	—	23	5	28	3	—	3
A.	26.	Tetanus	76	2	—	61	17	78	31	9	40
A.	27.	Anthrax	16	—	—	13	3	16	—	—	—

International List No.	Disease	PATIENTS						DEATHS		
		Africans	Asians	Europeans	Male	Female	TOTAL	Male	Female	TOTAL
A. 28.	Acute poliomyelitis	18	2	—	10	10	20	3	—	3
A. 29.	Acute infectious encephalitis	6	2	—	5	3	8	—	1	1
A. 30.	Late effects of acute poliomyelitis and acute infectious encephalitis	11	1	—	9	3	12	1	—	1
A. 31.	Smallpox—									
	(*a*) Variola major	—	—	—	—	—	—	—	—	—
	(*b*) Variola minor	44	—	—	34	10	44	—	—	—
A. 32.	Measles	112	—	10	73	49	122	—	—	—
A. 33.	Yellow fever	—	—	—	—	—	—	—	—	—
A. 34.	Infectious hepatitis	108	1	5	76	38	114	4	—	4
A. 35.	Rabies	1	—	—	1	—	1	—	—	—
A. 36.	(*a*) Louse-borne (epidemic) typhus	—	—	—	—	—	—	—	—	—
	(*b*) Flea-borne (murine) typhus	50	—	—	41	9	50	2	1	3
	(*c*) Tick-borne typhus	1	—	6	3	4	7	—	—	—
	(*d*) Unspecified typhus	7	1	—	4	4	8	1	—	1
	(*e*) Other rickettsial diseases	—	—	—	—	—	—	—	—	—
A. 37.	(*a*) Vivax malaria (benign tertian)	36	5	27	49	19	68	—	1	1
	(*b*) Malariae malaria (quartan)	70	2	6	51	27	78	4	—	4
	(*c*) Falciparum malaria (malignant tertian)	4,507	75	105	2,551	2,136	4,687	106	67	173
	(*d*) Other unspecified malaria	3,467	50	14	2,070	1,461	3,531	21	22	43
	(*e*) Blackwater fever	6	5	1	10	2	12	3	—	3
A. 38.	Schistosomiasis—									
	(*a*) Vesical	78	3	—	69	12	81	1	—	1
	(*b*) Intestinal	276	1	1	170	108	278	—	—	—
A. 39.	Hydatid disease	—	—	—	—	—	—	—	—	—
A. 40.	(*a*) Onchocerciasis	32	3	3	33	5	38	1	—	1
	(*b*) Loiasis	—	—	—	—	—	—	—	—	—
	(*c*) Filiariasis (bancrofti)	6	—	—	4	2	6	—	—	—
	(*d*) Other filiariasis	7	—	1	5	3	8	—	—	—
A. 41.	Ankylostomiasis	2,844	1	1	1,196	1,650	2,846	21	12	33
A. 42.	(*a*) Tapeworm	422	4	4	325	105	430	—	—	—
	(*b*) Ascaris	286	2	1	154	135	289	2	1	3
	(*c*) Guinea worm	72	—	—	65	7	72	—	—	—

IN-PATIENTS AT GOVERNMENT HOSPITALS, 1953

International List No.	Disease	Patients						Deaths		
		Africans	Asians	Europeans	Male	Female	Total	Male	Female	Total
A. 42.	(*d*) Other helminths	212	—	—	125	87	212	—	—	—
A. 43.	(*a*) Lymphogranuloma venereum	100	—	—	37	63	100	—	1	1
	(*b*) Granuloma inguinale, venereal	28	—	—	24	4	28	—	—	—
	(*c*) Other and unspecified venereal diseases	361	7	—	244	124	368	1	1	2
	(*d*) Food poisoning infection and intoxication (excluding Salmonella infections)	6	2	1	3	6	9	1	—	1
	(*e*) Relapsing fever	148	1	—	118	31	149	5	—	5
	(*f*) Leptospirosis (Weil's disease)	—	—	—	—	—	—	—	—	—
	(*g*) Yaws	334	—	—	217	117	334	1	—	1
	(*h*) Chickenpox	519	—	2	352	169	521	—	—	—
	(*i*) Dengue	—	—	—	—	—	—	—	—	—
	(*j*) Trachoma	1,433	2	—	601	834	1,435	—	—	—
	(*k*) Sandfly fever	—	—	—	—	—	—	—	—	—
	(*l*) Leishmaniasis	—	—	—	—	—	—	—	—	—
	(*m*) Trypanosomiasis—									
	(i) T. gambiense	9	—	—	7	2	9	—	—	—
	(ii) T. rhodesiense	1	—	—	1	—	1	—	—	—
	(iii) Unspecified	24	—	—	18	6	24	—	—	—
	(*n*) Tinea	13	—	—	9	6	13	—	—	—
	(*o*) Scabies	187	—	—	112	75	187	—	—	—
	(*p*) All other parasitic diseases	30	—	—	23	7	30	—	1	1
A. 44.	Malignant neoplasm of buccal cavity and pharynx	8	—	—	6	2	8	—	—	—
A. 45.	Oesophagus	9	2	—	10	1	11	3	—	3
A. 46.	Stomach	11	4	—	11	4	15	5	2	7
A. 47.	Intestine, except rectum	6	—	—	3	3	6	1	—	1
A. 48.	Malignant disease of rectum	12	—	1	5	8	13	—	4	4
A. 49.	Larynx	—	—	—	—	—	—	—	—	—
A. 50.	Trachea, bronchus and lung	1	—	—	—	1	1	—	—	—
A. 51.	Breast	32	—	1	5	28	35	—	1	1
A. 52.	Cervix uteri	42	1	1	—	44	44		1	1
A. 53.	Other and unspecified parts of uterus	22	1	—	—	23	23	—	1	1
A. 54.	(*a*) Prostate	11	—	2	13	—	13	5	—	5
	(*b*) penis	30	—	—	30	—	30	—	—	—

International List No.	Disease	Patients						Deaths		
		Africans	Asians	Europeans	Male	Female	TOTAL	Male	Female	TOTAL
A. 55.	Skin	28	1	—	27	2	29	3	—	3
A. 56.	Bone and connective tissue	48	—	—	31	17	48	3	2	5
A. 57.	Other unspecified sites	105	3	—	72	36	108	26	3	29
A. 58.	Leukaemia and aleukaemia	15	2	—	14	3	17	3	—	3
A. 59.	Neoplasms of lymphatic and haematopoietic system	41	1	—	28	14	42	5	1	6
A. 60.	Benign and unspecified neoplasms	613	12	2	100	527	627	1	8	9
A. 61.	Non-toxic goitre	12	—	—	2	10	12	—	2	2
A. 62.	Thyrotoxicosis	1	—	2	—	3	3	—	—	—
A. 63.	Diabetes mellitus	53	20	2	57	18	75	3	—	3
A. 64.	(*a*) Beriberi	1	—	—	1	—	1	—	—	—
	(*b*) Pellagra	4	—	—	2	2	4	—	—	—
	(*c*) Scurvy	1	—	—	1	—	1	—	—	—
	(*d*) Kwashiokor	348	—	—	185	163	348	22	25	47
	(*e*) Other deficiency states	175	—	—	98	77	175	14	14	28
A. 65.	(*a*) Hyperchromic anaemia	8	2	—	3	7	10	—	1	1
	(*b*) Hypochromic anaemia	295	3	—	128	170	298	10	6	16
	(*c*) Other unspecified anaemias	369	9	2	180	200	380	27	22	49
A. 66.	(*a*) Asthma	207	25	9	151	90	241	9	3	12
	(*b*) All other allergic, endocrine, metabolic and blood diseases	179	4	5	118	70	188	17	7	24
A. 67.	Psychoses	41	5	2	36	12	48	1	1	2
A. 68.	Psychoneuroses and disorders of personality	53	9	18	39	41	80	—	—	—
A. 69.	Mental deficiency	21	—	—	17	4	21	2	—	2
A. 70.	Vascular lesions affecting central nervous system	33	2	1	28	8	36	9	1	10
A. 71.	Meningitis (excluding meningococcal and tuberculous)	199	—	—	128	71	199	62	41	103
A. 72.	Disseminated sclerosis	7	—	—	6	1	7	—	—	—
A. 73.	Epilepsy	68	—	2	60	10	70	—	1	1
A. 74.	Inflammatory disease of eye	668	—	4	421	251	672	—	—	—
A. 75.	Cataract	55	50	1	81	25	106	1	—	1
A. 76.	Glaucoma	35	6	1	26	16	42	—	—	—
A. 77.	(*a*) Otitis externa	17	—	2	10	9	19	—	—	—
	(*b*) Otitis media and mastoiditis	284	—	2	172	114	286	—	—	—
	(*c*) Other inflammatory disease of ear	49	1	1	30	21	51	—	—	—

International List No.	Disease	Patients						Deaths		
		Africans	Asians	Europeans	Male	Female	TOTAL	Male	Female	TOTAL
A. 78.	(*a*) All other diseases of eye	692	26	7	419	306	725	—	—	—
	(*b*) All other diseases of nervous system and sense organs	142	9	8	117	42	159	6	3	9
A. 79.	Rheumatic fever	15	4	1	13	7	20	2	1	3
A. 80.	Chronic rheumatic heart disease	20	3	1	14	10	24	2	2	4
A. 81.	Arteriosclerotic and degenerative heart disease	12	3	3	12	6	18	2	4	6
A. 82.	(*a*) Syphilitic disease of heart or aorta	51	1	—	43	9	52	11	3	14
	(*b*) Other diseases of heart	220	10	5	145	90	235	37	18	55
A. 83.	Hypertension with heart disease	15	9	1	21	4	25	3	—	3
A. 84.	Hypertension without mention of heart disease	7	13	2	16	6	22	2	1	3
A. 85.	Diseases of arteries	14	2	1	10	7	17	1	—	1
A. 86.	Other diseases of circulatory system	226	8	34	166	102	268	11	3	14
A. 87.	Acute upper respiratory infections	1,491	5	50	875	671	1,546	7	6	13
A. 88.	Influenza	227	11	7	161	84	245	1	—	1
A. 89.	Lobar pneumonia	2,039	13	5	1,425	632	2,057	78	43	121
A. 90.	Bronchopneumonia	973	38	10	552	469	1,021	56	55	111
A. 91.	Primary, atypical, other and unspecified pneumonia	465	1	6	303	169	472	33	11	44
A. 92.	Acute bronchitis	546	5	3	327	227	554	4	3	7
A. 93.	Bronchitis, chronic and unqualified	334	22	4	239	121	360	1	2	3
A. 94.	Hypertrophy of tonsils and adenoids	182	16	23	120	101	221	1	1	2
A. 95.	Empyema and abscess of lung	49	1	—	45	5	50	10	—	10
A. 96.	Pleurisy	52	6	6	51	13	64	1	—	1
A. 97.	(*a*) Pneumoconiosis	—	—	—	—	—	—	—	—	—
	(*b*) All other respiratory diseases	161	5	3	123	46	169	7	1	8
A. 98.	(*a*) Dental caries	128	1	2	84	47	131	—	1	1
	(*b*) All other diseases of teeth and gums	205	8	6	131	88	219	—	—	—
A. 99.	Ulcer of stomach	42	5	6	38	15	53	1	—	1
A. 100.	Ulcer of duodenum	58	16	10	66	18	84	3	1	4
A. 101.	Gastritis and duodenitis	110	2	38	95	55	150	—	2	2
A. 102.	Appendicitis	50	76	35	120	41	161	4	—	4
A. 103.	Intestinal obstruction and hernia	2,299	31	24	1,870	484	2,354	114	48	162
A. 104.	(*a*) Gastro-enteritis and colitis (over 4 weeks of age)	847	30	54	554	377	931	32	24	56
	(*b*) Chronic enteritis and ulcerative colitis	7	1	2	7	3	10	4	—	4
A. 105.	Cirrhosis of liver	166	4	5	135	40	175	33	3	36

International List No.	Disease	PATIENTS						DEATHS		
		Africans	Asians	Europeans	Male	Female	TOTAL	Male	Female	TOTAL
A. 106.	Cholelithiasis and cholecystitis	2	4	14	8	12	20	—	—	—
A. 107.	Other diseases of digestive system	1,072	43	16	687	444	1,131	33	11	44
A. 108.	Acute nephritis	66	4	2	46	26	72	8	1	9
A. 109.	Nephritis, chronic, other and unspecified	148	5	4	115	42	157	23	5	28
A. 110.	Infections of kidney	85	16	23	44	80	124	5	2	7
A. 111.	Calculi of urinary system	—	14	6	17	3	20	—	—	—
A. 112.	Hyperplasia of prostate	27	3	4	32	2	34	5	1	6
A. 113.	Diseases of breast	103	1	10	7	107	114	—	—	—
A. 114.	(*a*) Hydrocele	245	4	—	249	—	249	1	—	1
	(*b*) Disorders of menstruation	211	68	49	—	328	328	—	1	1
	(*c*) Other diseases of genito-urinary system	1,905	86	65	767	1,289	2,056	30	10	40
A. 115.	Sepsis of pregnancy, childbirth and puerperium	130	3	—	—	133	133	—	13	13
A. 116.	Toxaemia of pregnancy and puerperium	22	24	3	—	49	49	—	10	10
A. 117.	Haemorrhage of pregnancy and childbirth	236	16	4	—	256	256	—	12	12
A. 118.	Abortion without sepsis or toxaemia	967	71	28	—	1,066	1,066	—	3	3
A. 119.	Abortion with sepsis	73	3	1	—	77	77	—	1	1
A. 120.	(*a*) Other complications of pregnancy, childbirth and puerperium	2,415	61	20	—	2,496	2,496	—	149	149
	(*b*) Delivery without complications	5,767	650	155	—	6,572	6,572	—	—	—
A. 121.	Infections of skin and subcutaneous tissue	2,102	18	25	1,435	710	2,145	11	12	23
A. 122.	Arthritis and spondylitis	345	11	8	266	98	364	1	1	2
A. 123.	Muscular rheumatism unspecified	232	9	8	174	75	249	—	—	—
A. 124.	Osteomyelitis and periostitis	211	7	1	155	64	219	—	—	—
A. 125.	Ankylosis and acquired musculo-skeletal deformities	55	1	—	44	12	56	—	—	—
A. 126.	(*a*) Chronic ulcer of leg	1,980	5	1	1,478	508	1,986	10	4	14
	(*b*) All other diseases of skin	1,231	26	8	866	399	1,265	4	2	6
	(*c*) All other diseases of musculo-skeletal system	776	9	5	551	239	790	5	3	8
A. 127.	Congenital malformations—Spina bifida and meningocele	13	1	—	5	9	14	1	2	3
A. 128.	Circulatory system	12	—	—	7	5	12	1	1	2
A. 129.	All others	30	—	1	21	10	31	3	3	6
A. 130.	Birth injuries	137	1	—	70	68	138	19	21	40

IN-PATIENTS AT GOVERNMENT HOSPITALS, 1953

APPENDIX VI (B)—*continued*

International List No.	Disease	Patients						Deaths		
		Africans	Asians	Europeans	Male	Female	TOTAL	Male	Female	TOTAL
A. 131.	Asphyxia of newborn and atelectasis	91	1	—	70	22	92	17	19	36
A. 132.	Infections of newborn—									
	(*a*) Diarrhoea	207	2	—	114	95	209	2	7	9
	(*b*) Ophthalmia	24		1	11	14	25	3	—	3
	(*c*) Other infections	44	—	—	21	23	44	17	16	33
A. 133.	Haemolytic disease of newborn	12	—	—	6	6	12	1	1	2
A. 134.	Other defined diseases of infancy	56	5	1	37	25	62	21	13	34
A. 135.	Immaturity and ill-defined diseases of infancy	700	5	—	370	335	705	96	86	182
A. 136.	Senility without mention of psychosis	27	1	3	21	10	31	9	3	12
A. 137.	(*a*) Pyrexia of unknown origin	1,078	24	36	645	493	1,138	30	14	44
	(*b*) Observation, without need for further medical care	2,048	159	50	1,041	1,216	2,257	1	5	6
	(*c*) All other ill-defined causes	1,151	42	24	528	689	1,217	11	9	20
AN 138.	Fracture of skull	209	2	4	182	33	215	47	11	58
AN 139.	Fracture of spine and trunk	123	8	10	124	17	141	14	4	18
AN 140.	Fracture of limbs	1,069	61	34	903	261	1,164	8	3	11
AN 141.	Dislocation without fracture	170	5	11	155	31	186	2	—	2
AN 142.	Sprains and strains of joints and muscles	256	1	12	236	33	269	—	—	—
AN 143.	Head injury (excluding fracture)	305	14	11	276	54	330	14	1	15
AN 144.	Internal injury of chest, abdomen or pelvis	108	4	3	96	19	115	24	4	28
AN 145.	Lacerations and open wounds	2,373	66	8	1.943	504	2,447	14	3	17
AN 146.	Superficial injuries, contusions and crushing with intact skin surface	1,710	33	16	1,368	391	1,759	3	2	5
AN 147.	Effects of foreign body entering through orifice	127	10	3	90	50	140	5	9	14
AN 148.	Burns and scalds	876	19	4	511	388	899	41	36	77
AN 149.	Effects of poisons	214	15	6	151	84	235	6	3	9
AN 150.	Other and unspecified effects of external causes	227	6	39	194	78	272	1	—	1
	TOTAL	73,397	2,437	1,441	40,668	36,607	77,275	1,704	1,128	2,832

CAUSES OF DEATH OF NON-AFRICANS

International List No.	Disease	Deaths Registered														Deaths in Hospital	
		Race					Age						Sex				
		European	Indian	Goan	Arab	Other	0–	1–	5–	15–	45–	65–	M	F	Total	European	Asian
A. 1.	Respiratory tuberculosis ..	—	4	1	2	—	1	—	—	1	4	—	5	1	6	—	—
A. 4.	Tuberculosis of bones and joints	—	1	—	—	—	—	—	—	—	1	—	—	1	1	—	—
A. 9.	General paralysis of insane ..	—	—	1	—	—	—	—	—	—	1	—	1	—	1	—	—
A. 16.	Dysentery	—	2	—	—	—	—	—	1	1	—	—	1	1	2	—	1
A. 20.	Septicaemia	1	1	—	—	—	1	—	1	—	—	—	—	2	2	—	—
A. 23.	Meningococcal infections ..	—	1	—	1	—	—	—	2	—	—	—	—	2	2	—	—
A. 29.	Acute infectious encephalitis ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
A. 37.	Blackwater fever	1	6	—	—	—	—	1	5	1	—	—	5	2	7	—	1
	Malaria, unqualified	1	11	—	—	—	5	4	1	1	—	1	3	9	12	—	2
	Cerebral malaria	—	18	—	1	—	6	7	2	4	—	—	8	11	19	—	—
	Complications of malaria ..	—	4	—	—	—	—	1	1	2	—	—	2	2	4	—	—
A. 43.	Food Poisoning ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
A. 46.	Carcinoma of stomach ..	1	1	—	—	—	—	—	—	—	1	1	1	1	2	—	1
A. 48.	Carcinoma of rectum	1	1	—	—	—	—	—	—	1	1	—	2	—	2	—	—
A. 54.	Carcinoma of prostate ..	1	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—
A. 57.	Carcinoma, other unspecified ..	1	3	—	—	—	—	—	1	2	—	1	4	—	4	—	1
A. 58.	Leukaemia	—	1	—	—	—	—	—	—	—	1	—	1	—	1	—	—
A. 59.	Neoplasms of haematopoietic system	1	—	—	—	—	—	—	—	—	—	1	1	—	1	—	—
A. 60.	Benign neoplasms	1	—	—	—	—	—	—	—	1	—	—	1	—	1	—	—
A. 63.	Diabetes mellitus	—	5	—	—	—	—	1	—	—	3	1	4	1	5	—	2
A. 65.	Anaemia	1	4	—	—	—	1	1	—	2	—	1	2	3	5	—	2
A. 66.	Allergic disorders	—	4	—	—	—	—	1	—	1	2	—	2	2	4	—	2
A. 68.	Psychoneuroses	—	1	—	—	—	—	—	—	—	1	—	1	—	1	—	—
A. 70.	C.N.S. vascular lesions ..	1	3	—	—	—	—	—	—	—	4	—	2	2	4	—	—
A. 73.	Epilepsy	—	1	—	—	—	—	—	—	1	—	—	1	—	1	—	—
A. 75.	Glaucoma	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
A. 80.	Chronic rheumatic heart disease ..	—	2	—	—	—	—	—	1	1	—	—	—	2	2	—	—
A. 81.	Degenerative heart disease ..	6	15	1	—	—	—	—	—	5	8	9	19	3	22	1	—
A. 82.	Other diseases of heart ..	4	8	—	—	—	—	—	1	—	5	6	6	6	12	1	—
A. 83.	Hypertensive heart disease ..	—	1	—	—	—	—	—	—	1	—	—	—	1	1	—	—

CAUSES OF DEATH OF NON-AFRICANS

International List No.	Disease	Deaths Registered														Deaths in Hospital	
		Race					Age						Sex				
		European	Indian	Goan	Arab	Other	0–	1–	5–	15–	45–	65–	M	F	Total	European	Asian
A. 84.	Hypertension without heart disease	—	4	—	—	—	—	—	—	1	2	1	2	2	4	—	1
A. 85.	Diseases of arteries	1	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—
A. 87.	Acute upper respiratory infection	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
A. 89.	Lobar pneumonia	—	2	—	—	—	1	—	—	1	—	—	1	1	2	—	—
A. 90.	Bronchopneumonia	3	12	—	—	—	8	4	1	—	1	1	9	6	15	—	1
A. 91.	Other unspecified pneumonia . .	—	10	—	1	—	4	1	1	1	1	3	7	4	11	—	—
A. 93.	Bronchitis chronic and unspecified	—	1	1	—	—	1	—	—	—	1	—	2	—	2	—	—
A. 94.	Other respiratory disease . .	—	2	—	—	—	—	1	—	1	—	—	2	—	2	—	—
A. 103.	Intestinal obstruction and hernia	—	2	—	—	—	2	—	—	—	—	—	2	—	2	—	2
A. 104.	Gastro-enteritis	—	7	—	—	—	7	—	—	—	—	—	3	4	7	—	3
A. 105.	Cirrhosis of liver	—	6	—	—	—	1	1	—	—	1	3	4	2	6	—	1
A. 107.	Other digestive diseases . .	—	2	—	—	—	—	—	—	—	2	—	2	—	2	—	—
A. 109.	Nephritis, chronic and unspecified	—	2	—	—	—	—	—	—	1	1	—	1	1	2	—	—
A. 110.	Infections of kidney . .	—	2	—	—	—	—	—	—	1	—	1	2	—	2	—	1
A. 114.	Genito-urinary disease	—	1	—	—	—	—	—	—	1	—	—	—	1	1	—	1
A. 115.	Sepsis of childbirth	—	1	—	—	—	—	—	—	1	—	—	—	1	1	—	—
A. 116.	Toxaemia of pregnancy . .	—	2	—	—	1	—	—	—	3	—	—	—	3	3	—	2
A. 117.	Haemorrhage of childbirth . .	—	4	—	—	—	—	—	—	4	—	—	—	4	4	—	—
A. 118.	Abortion	—	1	—	—	—	—	—	—	1	—	—	—	1	1	—	—
A. 120.	Other complications of child-bearing	—	1	—	—	—	—	—	—	1	—	—	—	1	1	—	—
A. 122.	Arthritis	—	1	—	—	—	—	—	—	—	1	—	—	1	1	—	—
A. 126.	Musculo-skeletal diseases . .	—	1	—	—	—	—	—	—	1	—	—	1	—	1	—	1
A. 129.	Congenital malformations, unspecified	—	1	—	—	—	1	—	—	—	—	—	—	1	1	—	—
A. 130.	Birth injuries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
A. 131.	Asphyxia of newborn	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
A. 132.	Infections of newborn . .	—	1	—	—	—	1	—	—	—	—	—	—	1	1	—	—
A. 134.	Other defined disease of newborn	—	—	—	—	1	1	—	—	—	—	—	—	1	1	—	—
A. 135.	Immaturity and other ill-defined disease of newborn . .	1	6	—	—	—	7	—	—	—	—	—	3	4	7	—	1
A. 136.	Senility	—	2	—	—	—	—	—	—	—	—	2	—	2	2	—	—

CAUSES OF DEATH OF NON-AFRICANS

International List No.	Disease	Deaths Registered														Deaths in Hospital	
		Race					Age						Sex				
		European	Indian	Goan	Arab	Other	0–	1–	5–	15–	45–	65–	M	F	Total	European	Asian
A. 137.	Other ill-defined causes ..	—	29	1	—	1	5	2	1	9	9	5	17	14	31	—	1
	TOTAL DEATHS FROM DISEASE ..	26	201	4	5	3	53	25	19	52	53	37	132	107	239	3	32
AE. 138.	Motor vehicle accidents ..	1	11	—	—	—	—	2	1	6	2	1	8	4	12	—	—
AE. 141.	Accidental falls	—	1	—	—	—	—	—	—	—	—	1	1	—	1	—	—
AE. 143.	Accidents caused by fire ..	—	5	—	—	—	—	1	1	1	2	—	2	3	5	—	—
AE. 144.	Accidental scalds	—	1	—	—	—	—	1	—	—	—	—	1	—	1	—	2
AE. 145.	Accident by firearm	1	3	—	—	—	—	—	1	3	—	—	4	—	4	—	—
AE. 146.	Accidental drowning	3	2	—	—	—	—	1	—	4	—	—	4	1	5	—	—
AE. 147.	All other accidents	4	2	—	—	—	—	1	—	2	3	—	5	1	6	1	8
AE. 148.	Suicide	2	1	—	—	—	—	—	—	2	1	—	2	1	3	—	—
	TOTAL DEATHS FROM INJURY ..	11	26	—	—	—	—	6	3	18	8	2	27	10	37	1	10
	TOTAL DEATHS, ALL CAUSES ..	37	227	4	5	3	53	31	22	70	61	39	159	117	276	4	42

CORRIGENDA TO ANNUAL REPORT OF MEDICAL DEPARTMENT FOR 1952

PAGE 14 LINE 31—

For " carrier of disease " *read* " carrier of this disease ".

PAGE 25 LINE 10—

For " whilst only 2% of adults ", *read* " whilst only 20% of adults ".

PAGE 30 TABLE XV—

Under "Live Births " 1952 *for* "23,153" read " 22,844 ".

PAGE 31 TABLE XVI—

Under " Buganda Rates per thousand Still Births " *for* " 67 " *read* " 62 ".

PAGE 43 TABLE XXI—

Under " Dispensaries without beds " *for* " Kampala—Rest of Buganda 7 " *read* " Kampala 1 rest of Buganda 6 ".

PAGE 49—

Under " Summary of Some Preparations Manufactured " *for* "Hydrocarpus " *read* "Hydnocarpus ".

PAGE 57—

Under " Revenue 1952 East African Railways and Harbours, Actual 1952 " *for* " 3,739 " *read* " 4,079 ".

Under " Revenue 1952 East African Railways and Harbours for anti-malarial clearing, Actual 1952 " *for* " 193 " *read* " 187 ".

In the column " Actual 1952 " *for* total " 71,226" *read* "71,560 ".

PAGE 58—

Under " Expenditure 1952 Reserve Stores " *for* " 61,165 " under " Actual 1951 " *read* " 65,708 " and for " 53,000 " under " Actual 1952 " *read* " 42,833 ".

Under " TOTAL MEDICAL DEPARTMENT " " Actual 1951 " *for* " 747,794 " *read* "752,337" and under "Actual 1952" *for* "960,912" *read* "950,745".

PAGE 66—

Under " A 25 Leprosy " *for* " Europeans 1, Male 26, Female 15, Total 41 " *read* Europeans —, Male 26, Female 14, Total 40 ".

PAGE 68—

" A 52 Cervix uteri " *for* " Male 2, Female 22 " *read* " Male —, Female 24 ".

PAGE 78—

For " Endomentriosis " *read* " Endometriosis ".

PAGE 79—

For " Mengo-encephalitis .. 24 " *read* " Mengo-encephalitis .. 27 ".

For " Tuberculosis .. 36 .. " *read* " Tuberculosis .. 46 .. ".

INDEX

A — Page

Abortions 6, 25, 71, 74
Accidents 31, 32, 75
Accommodation in Medical Units 37
Acholi 11, 13, 14, 15, 17, 20, 21, 22, 23, 36
Advisory Board of Health 28
Adulteration 29, 48
Aedes Index 32
African Development fund 21, 27, 36, 51
African Officials 3, 4, 6, 49
African vital statistics 5, 63, 66
Air services 32
Amentia 40
Ambulances 45
Anaemia 12, 69, 73
Anaesthesia 36
Ankole 14, 17, 21, 28, 36
Antibiotics 21, 22, 43
Anti-malaria measures 13
Anthrax 17, 66
Appointments 59
Arthropod-borne diseases 13
Arab vital statistics 73
Artificial limbs 35, 36
Asian officials 10
Asian vital statistics 9, 63, 66, 73
Autopsies 47

B

Beds in medical units 37
Belgian Congo 20
Bilharzia 16
Births 25
Blindness 11
Blood protein 12
Blood stains, suspected 46
Bombo 34
Board of Health, Advisory 28
British Council 35
Bucket latrines 29
Buganda 6, 13, 14, 20, 31, 38
Buildings, Hospital 31, 34, 35
Bunyoro 6, 12, 14, 17, 18, 24, 36
Burns 6, 72
Busoga 14, 16, 18, 24, 28, 39
Buvuma 14, 36

C

Cancer 6
Census 6
Central Prison 32, 33
Centre International De l'Enfance 12
Cerebro-spinal meningitis 20
Chemist's report 48
Chickenpox 17, 68
Child welfare 13, 23
Children 24, 27, 35, 40
Children's clinics 26
Chlorination 28, 48
Classification of diseases 63, 66
Colonial Development and Welfare 35
Communicable diseases 13
Community Development 2, 24, 30, 35, 36
Construction Camps 31, 56
Conjunctivitis 26
Corrigenda to 1952 Report 76
Criminal lunatics 30, 40

D

Deaths 5, 6, 31, 33, 39, 41, 66, 73
Deaths of officials 6, 7, 8, 10

Page

Deaths in Hospitals 73, 75
Dental Assistants 3
Dental caries 41, 48, 70
Dental service 3, 27, 41, 43, 62
Dental surgeons 41, 46, 62
Dentist legislation 54
Dementia 40
Departures 60
Destitutes 35
Devolution of Local Medical Services 4
Diet 12, 27, 32, 33
Diphtheria 17, 66
Diploma in medicine 2, 50
Diseases 37, 66
Dispensaries 34, 36, 37, 38
Dispensers 51, 52
District Council Bye-laws 53
Doctors 34, 45, 46, 50
Dracontiasis 15, 67
Dysentery 66, 73

E

East African Medical Unit 13
Eastern Province 14, 19, 20, 28, 37, 38, 56
Eating houses 29
Education, Health 23, 24
Employed persons 31
Encephalitis, post-vaccinal 21
Entebbe 15, 32, 41
Enteric fever 22
Entomologists 16, 61
Epilepsy 40, 69, 73
Establishment 61
European officials 8
European vital statistics 7, 8, 22, 63, 66
Expenditure 19, 57

F

Factories legislation 53
Fertility 5, 6
Filariasis 17, 67
Financial 57
Flies 29
Fluorine in water 48
Foodstuffs 28, 48
Food supplies 11, 12
Forensic examination 48
Fort Portal 28

G

Galenicals, preparation of 44
General Medical Council 35
Goans 73
Gonorrhoea 22, 47, 66
Guinea worm 15, 67
Gulu 16

H

Health Assistant, School 3
Health education 2, 4, 23
Health Inspectors 2, 24, 51, 52, 61
Health of African officers 6
Health of Asian officers 10
Health of European officers 8
Health of prisoners 32
Helminthiasis 15, 67
Haemoglobin 12
Health services 3, 31
High Commission 9
Histological examinations 47

Page
Hoima 15, 34, 56
Home visiting 35
Honours 50
Hospitals 31, 34, 37
Hostel for ambulant sick .. 35
Hostel for nurses 34, 35, 50
Hotels 29
Hotel legislation 53
Housing 27, 30
Hygiene 27, 28, 31, 61
Hygiene Orderlies 24, 51

I
Idiocy 40
Indents, pricing of 43
Infant mortality 6, 25
Infant welfare 24
Infective hepatitis 18, 67
Infectious diseases 13
Injections, preparation of .. 44
Injuries 31, 32, 75
Inpatients 38, 66
Insecticides, preparation of .. 44
Insect-borne diseases 13, 66
International hygiene 31
Internships 35, 45
Invaliding 6, 8

J
Jinja 23, 27, 28, 29, 30, 34, 36, 41, 43, 48, 56

K
Kabale 56
Khan tests 47
Kampala 13, 15, 23, 26, 27, 28, 30, 43, 51, 55
Karamoja .. 6, 11, 15, 17, 24, 34, 26, 42
Katwe byepass 28
Kigezi 12, 17, 36
Kilembi 31
Kitgum 16, 23, 28, 34
Kwashiorkor .. 6, 12, 35, 49, 69

L
Labour camps 31
Labour companies 31
Laboratory services .. 15, 19, 35, 46, 61
Laboratory Assistant 51, 52
Lango 11, 14, 15, 16, 20, 22, 26, 28, 30, 34
Latrines 24, 27, 28, 29, 30
Legislation 53
Leprosy 18, 35, 66
Leper settlements 18
Licenciate in Medicine and Surgery 2, 45, 50
Lira 13, 17, 34, 51
Liver flukes 20
Loa-Loa 17, 67
Local Civil Service .. 3, 4, 6, 49, 61

M
Madi 15, 24, 55
Maize meal 11, 48
Makerere College .. 2, 35, 45, 49, 50
Malaria .. 5, 13, 26, 29, 31, 48, 67, 73
Malnutrition 35
Masaka 14, 34, 36, 51, 55
Masindi 28, 34, 56
Maternal deaths 25
Maternal welfare 24
Maternity Training School .. 3, 36, 37
Maternity units 25, 36, 37
Maternity wards 34
Mbale .. 14, 18, 23, 34, 43, 49, 51, 55
Mbarara 34, 56
Measles 20, 26, 67
Meat 28
Medical Assistants 49, 51
Medical development 3
Medical Officers .. 34, 45, 46, 50, 59
Medical Practitioners legislation 54
Medical registration 35, 45, 54
Medical research 49
Medical Research Council 2, 5, 21, 46, 49
Medical schools .. 2, 35, 45, 49, 50
Mengo .. 6, 17, 21, 22, 26, 36, 39
Meningitis 20, 69
Mental diseases 39
Mental hospital 12, 37, 62
Metabolic ward and laboratory .. 35, 49
Midwives 16, 49, 50
Midwives legislation 54
Midwives Training School .. 3, 36, 37
Milk 12, 20, 35, 40
Missions 18, 24, 25, 26, 36, 37, 38, 46, 50
Mityana 34
Motor vehicles 45
Moroto 27, 33, 38
Moyo 34
Mubende .. 14, 17, 18, 28, 34, 36
Mukono 56
Mulago Hospital 16, 21, 22, 25, 34, 35, 43, 49, 50
Mumps 20

N
Namasagali 34
Nile 16
Non-Government hospitals .. 38
Northern Province 11, 14, 15, 17, 18, 23, 28, 31, 38, 56
Notification of diseases ..11, 14, 56
Nuffield Foundation .. 2, 4, 35, 49
Nurses 34, 35, 49, 52, 61
Nurses hostel, Mulago ..34, 35, 50
Nursing Orderlies 51, 52
Nursing Sisters 61
Nutrition 3, 11, 12, 35
Nutrition Advisory Committee .. 12

O
Occupational Therapy .. 35
Officials, vital statistics .. 6, 8, 10
Onchocerciasis 16, 67
Ophthalmic disease .. 3, 11, 23, 36
Optic nerve atrophy 23
Otitis 26, 69
Otway pits 29, 33
Outpatients 39, 63
Overcrowding 27, 28

P
Pan African Health Conference 30
Patients 8, 9, 19, 35, 37, 38, 41, 43, 63, 66
Pellagra 12, 40, 69
Penicillin 22, 43
Pharmaceutical 43, 61
Pharmacists 43, 46
Pharmacy and Poisons Board .. 44
Pharmacy and Poisons Legislation 54
Physiotherapy 36
Plague 13, 31, 66

INDEX—*continued*

Page
Plantains 12
Pneumonia 70, 74
Poison 48, 72
Poisons Regulations 54
Poliomyelitis 20, 67
Pollution 20, 30, 48
Population, African 5, 27
Population, Asian 7
Population, European .. 9
Port Hygiene 31
Post-graduate qualifications .. 52
Posters 23, 42
Post-mortem examination .. 47
Pricing of Indents 43
Prisoners 32, 33
Private practice 50
Promotions 59
Public Health Ordinance .. 55
Publications 56

Q

Quarantinable diseases .. 31
Quarters, staff 34

R

Rabies .. 20, 55, 67
Radiographers, African Assistant 3, 43, 51, 52
Radiology 43, 61
Railway extension 31
Rainfall .. 11, 13, 32
Recreation 35
Red Cross 35
Refuse collection and disposal 29, 30
Registration, births and deaths .. 6, 11
Registration, professional 3, 35, 45, 50
Relapsing fever 13, 68
Repatriation 35
Reproduction rates 6
Research 5, 47, 49
Respiratory disease .. 34, 40, 70, 74
Rest houses 29
Restaurants 29
Revenue 57
Rockefeller Foundation .. 2
Rodent control 13, 30, 32
Ross Institute 13

S

Sanitation, rural 30
Sanitation, urban 29
Scabies 26, 68
Schistosomiasis 16, 67
School health 27
School health assistants .. 3, 27, 51
Schizophrenia 40
Scientific papers 56
Sewage disposal 30
Sick leave 6, 8, 10
Sickle cells 13
Sickness, Officials 6, 8, 10
Simulium 16, 67
Slaughter houses 28
Sleeping Sickness .. 2, 14, 55, 68
Smallpox 21, 31, 67
Social Research Institute .. 5
Soda-water 29

Page
Soroti 17, 34
Specialists 18, 21, 35, 50, 59
Spleen rates 13, 26
Spring protection 24
Staff 34, 49, 57, 59
Staff conference 35
Staff quarters 34
Still births 25
Stores 43, 44
Stores Advisory Committee .. 44
Streptomycin 21, 43
Sudan 24
Sugar 42
Surgical instruments 43
Syphilis .. 22, 26, 40, 47, 66, 70
Surveys 3, 11, 12, 13, 16, 18, 28, 41, 49

T

Technical School, Kyambogo .. 36
Tender Board 12
Teso 16, 17, 20, 24, 26
Tetanus 66
Toro 6, 12, 14, 17, 29
Tororo .. 13, 14, 20, 21, 27, 34, 48
Town planning 27, 55, 56
Toxaemias of pregnancy ..25, 71, 74
Trachoma 11, 16
Training centres ..3, 34, 42, 49, 51, 62
Transport 45, 62
Tropical ulcers 31
Trypanosomiasis .. 2, 14, 55, 68
Tuberculosis 3, 21, 26, 28, 32, 35, 37, 40, 46, 66, 73
Typhoid 22, 33, 66
Typhus 15, 67

U

Ulcer, tropical 31
Urban sanitation 29
United Nations Organisation .. 4

V

Vaccination 21
Vehicle mechanic, African .. 4
Venereal diseases .. 22, 26, 35, 40, 47
Virus Institute 49
Visitors, distinguished .. 4, 5
Vital statistics ..5, 7, 8, 9, 22, 63, 73

W

Water supplies 24, 28, 30, 34, 48, 56
Weather 11, 13, 30, 32, 34
Welfare 24, 30, 35
West Nile .. 14, 16, 17, 20, 24, 55
Western Province 14, 15, 17, 18, 28, 29, 38
Whooping cough 26, 66
World Health Organisation .. 2, 15, 30
Wulcheria 17

X

Xerophthalmia 32

Y

Yaws 68
Yellow fever .. 2, 15, 31, 67

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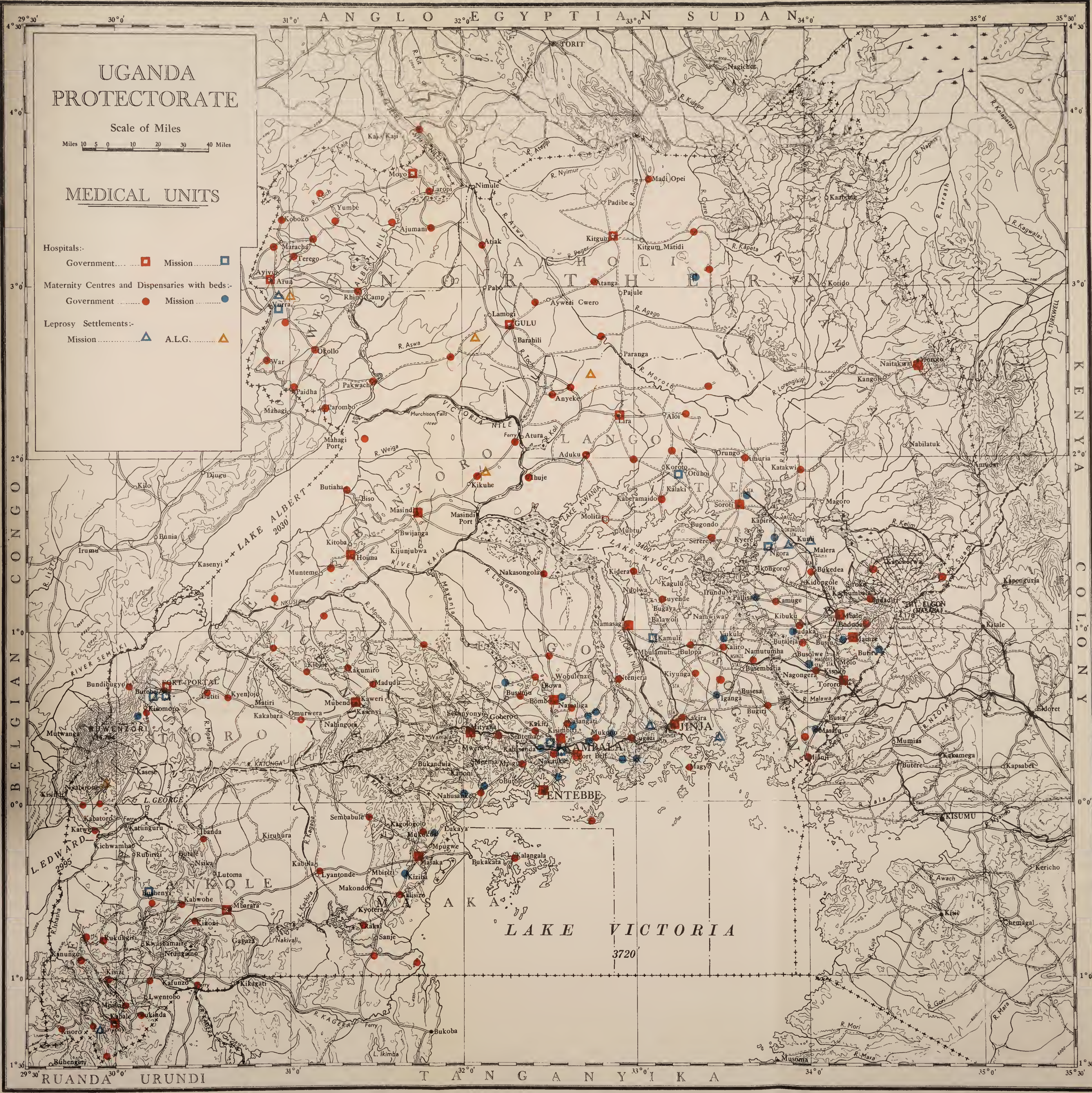

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